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A VERY LITTLE OBSERVATION will convince any one that, in the United States, a new era, in *Domestic Architecture*, is already commenced. A few years ago, and all our houses, with rare exceptions, were built upon the most meagre plan. A shelter from the inclemencies of the weather; space enough in which to eat, drink and sleep; perhaps some excellence of mechanical workmanship in the details; these were the characteristic features of the great mass of our dwelling-houses—and especially country houses—a few years ago.

A dwelling-house, for a civilized man, built with no higher aspirations than these, we look upon with the same feelings that inspire us when we behold the Indian, who guards himself against heat and cold by that primitive, and, as he considers it, sufficient costume—a blanket. An unmeaning pile of wood, or stone, serves as a shelter to the bodily frame of man; it does the same for the brute animals that serve him; the blanket covers the skin of the savage from the harshness of the elements, as the thick shaggy coat protects the beasts he hunts in the forest. But these are only manifestations of the grosser wants of life; and the mind of the civilized and cultivated man as naturally manifests itself in fitting, appropriate, and beautiful forms of habitation and costume, as it does in fine and lofty written thought and uttered speech.

Hence, as society advances beyond that condition, in which the primary wants of human nature are satisfied, we naturally find that literature and the arts flourish. Along with great orators and inspired poets, come fine architecture, and tasteful grounds and gardens.

Let us congratulate ourselves that the new era is fairly commenced in the United States. We by no means wish to be understood, that all our citizens have fairly passed the barrier that separates utter indifference, or puerile fancy, from good taste. There are, and will be, for a long time, a large proportion of houses built without any definite principles of construction, except those of the most downright necessity. But, on the other hand, we are glad to perceive a very considerable sprinkling over the whole country—from the Mississippi to the Kennebec—of houses built in such a manner, as to prove, at the first glance, that the ideal of their owners has risen above the platform of mere animal wants: that they perceive the intellectual superiority of a beautiful design over a meaningless and uncouth form; and that a

house is to them no longer a comfortable shelter merely, but an expression of the intelligent life of man, in a state of society where the soul, the intellect, and the heart, are all awake, and all educated.

There are, perhaps, few persons who have examined fully the effects of a general diffusion of good taste, of well being, and a love of order and proportion, upon the community at large. There are, no doubt, some who look upon fine houses as fostering the pride of the few, and the envy and discontent of the many; and—in some transatlantic countries, where wealth and its avenues are closed to all but a few—not without reason. But, in this country, where integrity and industry are almost always rewarded by more than the means of subsistence, we have firm faith in the *moral* effects of the fine arts. We believe in the bettering influence of beautiful cottages and country houses—in the improvement of human nature necessarily resulting to all *classes*, from the possession of lovely gardens and fruitful orchards.

We do not know how we can present any argument of this matter, if it requires one, so good as one of that long-ago distinguished man—Dr. DWIGHT. He is describing, in his *Travels in America*, the influence of good architecture, as evinced in its effects on the manners and character of the inhabitants in a town in New-England:

"There is a kind of symmetry in the thoughts, feelings, and efforts of the human mind. Its taste, intelligence, affections, and conduct, are so intimately related, that no preconcertion can prevent them from being mutually causes and effects. The first thing powerfully operated upon, and, in its turn, proportionately operative, is the taste. The *perception* of beauty and deformity, of refinement and grossness, of decency and vulgarity, of propriety and indecorum, is the first thing which influences man to attempt an escape from a grovelling, brutish character; *a character in which morality is chilled, or absolutely frozen.* In most persons, this perception is awakened by what may be called the *exterior* of society, particularly by the mode of building. Uncouth, mean, ragged, dirty houses, constituting the body of any town, will regularly be accompanied by coarse, grovelling manners. The dress, the furniture, the mode of living, and the manners, will all correspond with the appearance of the buildings, and will universally be, in every such case, of a vulgar and debased nature. On the inhabitants of such a town, it will be difficult, if not impossible, to work a conviction that intelligence is either necessary or useful. Generally, they will regard both learning and science only with contempt. Of morals, except in the coarsest form, and that which has the least influence on the heart, they will scarcely have any apprehensions. The rights enforced by municipal law, they may be compelled to respect, and the corresponding duties they may be necessitated to perform; but the rights and obligations which lie beyond the reach of magistracy, in which the chief duties of morality are found, and from which the chief enjoyments of society spring, will scarcely gain even their passing notice. They may pay their debts, but they will neglect almost every thing of value in the education of their children.

"The very fact, that men see good houses built around them, will, more than almost anything else, awaken in them a sense of superiority in those by whom such houses are inhabited. The same sense is derived, in the same manner, from handsome dress, furniture, and equipage. The sense of beauty is necessarily accompanied by a perception of the superiority which it pos-

sesses over deformity; and is instinctively felt to confer this superiority on those who can call it their own, over those who cannot.

"This, I apprehend, is the manner in which coarse society is first started towards improvement; for no objects, but those which are sensible, can make any considerable impression on coarse minds."

The first motive which leads men to build good houses is, no doubt, that of increasing largely their own comfort and happiness. But it is easy to see that, in this country, where so many are able to achieve a home for themselves, he who gives to the public a more beautiful and tasteful model of a habitation than his neighbors, is a benefactor to the cause of morality, good order, and the improvement of society where he lives. To place before men reasonable objects of ambition, and to dignify and exalt their aims, cannot but be laudable in the sight of all. And in a country where it is confessedly neither for the benefit of the community at large, nor that of the succeeding generation, to amass and transmit great fortunes, we would encourage a taste for beautiful and appropriate architecture, as a means of promoting public virtue and the general good.

We have said beautiful and *appropriate* architecture—not without desiring that all our readers should feel the value of this latter qualification as fully as we do. Among the many strivings after architectural beauty, which we see daily made by our countrymen, there are, of course, some failures, and only now and then examples of perfect success. But the rock on which all novices split—and especially all men who have thought little of the subject, and who are satisfied with a feeble imitation of some great example from other countries—this dangerous rock is *want of fitness*, or *propriety*. Almost the first principle, certainly the grand principle, which an apostle of architectural progress ought to preach in America, is, "keep in mind PROPRIETY." Do not build your dwelling-houses like temples, churches, or cathedrals. Let them be, characteristically, dwelling-houses. And more than this; always let their individuality of purpose be fairly avowed; let the cottage be a cottage—the farm-house a farm-house—the villa a villa, and the mansion a mansion. Do not attempt to build a dwelling upon your farm after the fashion of the town-house of your friend, the city merchant; do not attempt to give the modest little cottage the ambitious air of the ornate villa. Be assured that there is, if you will search for it, a peculiar beauty that belongs to each of these classes of dwellings that heightens and adorns it almost magically; while, if it borrows the ornaments of the other, it is only debased and falsified in character and expression. The most expensive and elaborate structure, overlaid with costly ornaments, will fail to give a ray of pleasure to the mind of real taste, if it is not appropriate to the purpose in view, or the means or position of its occupant; while the simple farm-house, rustically and tastefully adorned, and ministering beauty to hearts that answer to the spirit of the beautiful, will weave a spell in the memory not easily forgotten.

MALAGA RAISINS.—These are all made by merely drying the large white Muscatel grape, without the addition of any ingredient. They are all raised within two leagues of the southern Spanish coast, and do not succeed further inland. The Lexia raisins, used for puddings, are, however, produced in the interior.

CULTURE OF PARLOR PLANTS—CAMELLIAS AND AZALEAS.

BY J. B. W., NEW-YORK.

As I see by occasional queries, in your journal, that there are some—perhaps many—of your fair readers desirous of gaining information on the care and culture of those green-house plants, kept in parlors, I will venture to offer, now and then, through your columns, the result of some experience in this kind of culture for fifteen years past.

The two finest genera of plants, usually cultivated in dwelling-rooms, are, unquestionably, the CAMELLIA and the AZALEA. Both of these plants are remarkable for the great beauty of their flowers; and taken together, they furnish a bloom for the parlor from December to May. The Camellias are in their perfection in the first part of the winter—the Chinese Azaleas in the last part. The first are not more remarkable for the size, symmetry and richness of their flowers, than are the last for the delicacy, elegance and profusion of their blossoms. Take these two plants, in all their variety, and they would alone fill a very large conservatory. A few select varieties of each are, of course, all that room can be found for in the parlor; but when their merits are all told, they certainly deserve a preference over all other plants for this purpose. I shall, therefore, devote a few words to-day to the care and culture of these plants only.

I should say, in the beginning, that the greatest evils the Camellia has to contend with in parlor culture, are—first, in the changes from heat to cold; and second, in a dry and dusty atmosphere. The Camellia will bear a great deal of cold without injury; but it very quickly suffers if there is a rapid change in the temperature of a room. It ought, therefore, to have a position as much guarded as possible against these changes; and in a cold climate, perhaps this is more effectually attained by a double window, hung casement-like, so that the inner one may be opened in the day time and closed at night; or kept closed altogether in extremely cold weather. (Double glazing has the effect of decomposing the light, and is therefore not so good in strong day-light or sunshine.)

When the blooming season approaches, a a room where Camellias are kept should, in its temperature, be as nearly uniform as possible. It ought not to sink below 50° of Fahrenheit's thermometer. The plants should be regularly watered every day; but no more water should be given than the roots are able to take up; and this may be easily ascertained by looking to see the state of the top soil. If this is positively wet, you may feel quite certain that not a drop more water ought to be given while it remains so. You will, therefore, omit watering for one or two days, as the case may be. When the plant gets fairly in a blooming condition—that is, when several flowers are beginning to expand, you may water *once a week* with guano water; made by infusing a pound of guano in ten gallons of water. This will give additional size and strength to the blossoms. After the flowers drop, and just as the plant begins growing, you may use this guano water *three times a week*. Everything for the next year depends on the growth of the Camellia at this time; for its whole growth for the nex twelve months is completed in about three

weeks: and whether you are to have a fine setting of bloom-buds for the next winter, and fine shoots and foliage, depends altogether on the advantages of light and food which your plants have during these critical three weeks named. The advantage of guano water in making fine foliage and fine bloom-buds, is now abundantly proved by experiment; there being but few of our best practical growers of the Camellia who do not use it at that season.

The *breathing pores* in the leaf of the Camellia are rather small, and therefore easily choked up with the dust from a grate. Hence, it is well to wash off the leaves with a syringe once in eight or ten days. I have, for a couple of years, followed this mode with the best results. I wrap the pot round about with a bit of coarse cloth, to prevent the soil from being displaced, and from getting over-wetted. I then set the plant down sideways in a bath-tub, and give it a gentle *shower-bath* of luke warm water. Syringing with a common hand syringe is equally good, but not so rapidly performed. I am quite satisfied, from experience, that a shower-bath is as salutary and necessary to a house plant as to a sedentary man.

The Chinese Azaleas are so easy of culture, and they are so hardy, that they will bloom quite well in a room where "Jack Frost" occasionally enters; and regular watering is almost all they need in the common routine. The main point in growing them, is to watch them well when they are making the spring growth; (for, like the Camellia, everything of the next year's thrift and bloom is settled then;) and not let them, at that time, lack water and a little liquid manure every other day.

The best soil for the Camellia is made by mixing one-half turfy loam, one-third well rotted manure, (from an old hot-bed,) and the rest leaf mould from the woods. For Azaleas, equal quantities of turfy loam, well decomposed dung, and peat earth. I ought perhaps to add, for the novice, that "turfy loam" is gotten by laying up sods from a good piece of old meadow, or pasture, in a heap to heat and rot.

I will say something of other parlor plants hereafter. Yours respectfully. J. B. W.

New-York, Dec. 9th, 1847.

ON THE PRACTICAL USE OF LEAVES.

BY HENRY WARD BEECHER.

THERE are two facts in the functions of the leaf, which are worth consideration on account of their practical bearings. The food of plants is, for the most part, taken in solution, through its roots. Various minerals—silex, lime, alumina, magnesia, potassa—are passed into the tree in a dissolved state. The sap passes to the leaf, the superfluous water is given off, *but not the substances which it held in solution.* These, in part, are distributed through the plant, and, in part, remain as a *deposit in the cells of the leaf.* Gradually the leaf chokes up, its functions are impeded, and finally entirely stopped. When the leaf drops, it contains a large per cent. of mineral matter. An autumnal or old leaf yields, upon analysis, a very much larger proportion of earthy matter than a vernal leaf, which, being yet young, has not received within its cells any considerable deposit. It will be found, also, that the leaves contain a very much higher

per cent. of mineral matter than *the wood of the trunk*. The dried leaves of the Elm contain more than eleven per cent. of ashes, (earthy matter,) while the wood contains less than two per cent.; those of the Willow, more than eight per cent., while the wood has only 0.45; those of the Beech 6.69, the wood only 0.36; those of the (European) Oak 4.05, the wood only 0.21; those of the Pitch Pine 3.15, the wood only 0.25 per cent.*

It is very plain from these facts that, in forests, the mineral ingredients of the soil perform a sort of *circulation;* entering the root, they are deposited in the leaf; then, with it, fall to the earth, and by its decay, they are restored to the soil, again to travel their circuit. Forest soils, therefore, instead of being impoverished by the growth of trees, receive back annually the greatest proportion of those mineral elements necessary to the tree, and besides, much organized matter received into the plant from the atmosphere; soils therefore are gaining instead of losing. If the owner of parks or groves, for neatness sake, or to obtain leaves for other purposes, gathers the annual harvest of leaves, he will, in time, take away great quantities of mineral matter, by which the soil, ultimately, will be impoverished, unless it is restored by manures.

Leaf manure has always been held in high esteem by gardeners. But many regard it as a purely *vegetable substance;* whereas, it is the best mineral manure that can be applied to the soil. What are called vegetable loams, (not peat soils, made up principally of decomposed *roots*,) contain large quantities of earthy matter, being mineral-vegetable, rather than vegetable soils.

Every gardener should know, that the best manure for any plant, is the decomposed leaves and substance of its own species. This fact will suggest the proper course with reference to the leaves, tops, vines, haulm, and other vegetable refuse of the garden.

The other fact connected with the Leaf, is its function of *exhalation.* The greatest proportion of crude sap which ascends the trunk, upon reaching the leaf, is given forth again to the atmosphere, by means of a particularly beautiful economy. The *quantity* of moisture produced by a plant is hardly dreamed of by those who have not specially informed themselves. The experiments of Hales have been often quoted. A sunflower, three and a half feet high, presenting a surface of 5.616 square inches exposed to the sun, was found to perspire at the rate of twenty to thirty ounces avoirdupois, every twelve hours, or seventeen times more than a man. A vine with 12 square feet, exhaled at the rate of five or six ounces a day. A seedling apple tree, with twelve square feet of foliage, lost nine ounces a day.*

These are experiments upon very small plants. The vast amount of surface presented by a large tree must give off immense quantities of moisture. The practical bearings of this fact of vegetable exhalation are not a few. Wet forest-lands, by being cleared of timber, become dry; and streams, fed from such sources, become almost extinct, as civilization encroaches on wild woods. The excessive dampness of crowded gardens is not singular, and still less is it strange that dwellings covered with vines, whose windows are choked with shrubs, and whose roof is overhung with branches of trees, should be intolerably damp; and when the good housewife is scrubbing, scouring and brushing, and, ne-

* See Dr. Gray's Botanic Text Book, an admirable work, which every horticulturist should own and study.

* Lindley's Horticulture, p. 42–44. Gray's Botany, p. 131.

vertheless, marvelling that her house is so infested with mould, she hardly suspects that her troubles would be more easily removed by the axe or saw, than by all her cloths and brushes. A house should never be closely surrounded with shrubs. A free circulation of air should be maintained all about it, and shade trees so disposed as to leave large openings for the light and sun to enter. The unusual rains of the current season have produced so great a dampness in our residences, that no one can fail to have noticed its effect, both on the health of the occupants, and upon the beauty and good condition of their household substance. —*Western Farmer and Gardener.*

ON THE IMPROVEMENT OF SMALL FRUITS.

BY DR. WM. W. VALK, FLUSHING, N. Y.

THIS is the title of an interesting paper, at page 506 of the *London Horticultural Magazine* for November, 1847, therein copied from the *Gardeners' Journal*, another English periodical of considerable merit. We also have in the Horticulturist for December, page 265, a very promising statement, in the shape of "Notes on Currants, Raspberries, &c.," by a writer whose enthusiasm is boundless; yet our hopes are somewhat checked by a very natural feeling of regret, that anticipations may be less than realized, inasmuch as the author's constant "oppression" of business, is more than likely to interfere with that personal attention, so essential to the process of raising better fruit than we have already.

No reflecting man at all doubts that a vast field is open for improvement, in the size and quality of what are termed the small fruits. A great deal has already been accomplished, but not enough to be satisfied with; for the present generation is as restless of change in horticulture as in everything else: it will have the *best*, if at all attainable. The rage for *novelties*, whether in fruits or flowers, is of a decidedly epidemic character; if a thing is *new*, no matter what are its qualities, amateurs are desirous of possessing it, and not unfrequently when they have got it, and tested its merits by personal observation, every hope but ends in the severest disappointment; and the discovery is made, when too late, that it is one thing to grow and *sell*, quite another to purchase, on the strength of puffs in advertisements or catalogues, even though the latter may have reached the 36th edition.

The writer of the article in the *Gardeners' Journal* asks—"what *can* be done for the Strawberry, the Raspberry, the Gooseberry, and the Currant?" He has yet to learn what *has* been done, and does not dream of the operations that have been going on in "our own country." He is not aware, that on this side of the Atlantic a Nursery exists, "whose accuracy is positive;" so positive indeed that a fruit, described in the Catalogue of 1845, as "*first in flavor and quality*," is, in 1847, set down as "*worthless.*" We can tell Mr. Tomlinson that he is likely to come out second best in his efforts to improve the Currant; for *we* take "the climax of European attainment as the starting point for American development." There are Currants growing (seedlings, we presume,) in "a nursery" in this village, "equal to the largest he (Mr. T.) enumerates, which he does not possess, and

probably knows not of." No matter where they came from, or how they were produced; here they are, and the public will be able to judge of their qualities in the course of time, if they do not *change* their character too soon.

What has been done for the Strawberry? A great deal in England and upon the continent; but, as *we* always start from the "*climax*" of attainment by our transatlantic brethren, it follows that more has been done here than there. At all events, those who raise seedlings *to sell*, say so; and as their statements are, perhaps, altogether disinterested, we shall have to believe them. We have seen the time when it was all "*silly twattle*" to talk about male and female strawberry plants; but these days have departed, and seedlings innumerable are now raised by *artificial*(?) fecundation. There are several excellent varieties of the Strawberry in cultivation, quite good enough for most people: still, we want better; and seeedlings are increasing at a wonderful rate—all named too—and "excellent" in quality. Nothing is easier than to originate tens of thousands of plants from the seed; but, "are these experiments conducted with any special aim? Are the new sorts bred with reference to certain desiderata?" Does the experimenter look to certain results, based upon his efforts at impregnation, in crossing varieties? Are the seedlings offered to the public, really hybrids?

Impregnation is not a process so easily accomplished as some persons would have us think. It requires calculation, sagacity, delicate manipulation, and a sufficient knowledge of the subject, so as not to fail, or to create insignificant varieties.

If the small fruits have been, and are to be *improved*, there must be some *specific objects* presented to the mind for accomplishment. What these objects were, with the growers, we have no means of judging; nor do we know what they are. A gentleman in a western state has raised "choice varieties of new seedling Strawberries, confidently recommended to the public as superior to any heretofore cultivated." By what process did he raise them? From what varieties did they originate? Was the seed produced by hybridization by the hand? Or was it not impregnated at all? or only by the bees? For aught we know, these seedlings may have been only accidental; or, perhaps, the seed of choice varieties may have been saved and sown, with a view to the selection of improved sorts. Another grower's varieties are "incomparably superior to any others, and nowhere else obtainable." Truly, says the editor of the Horticulturist, parents are partial to their own offspring; "second and third-rate seedlings are pressed upon public attention as fruits of the finest quality—unsurpassed and unsurpassable. The public are asked to buy and plant these *new* sorts, which, when fairly proved, turn out to be of no value, or decidedly inferior to those already in cultivation." Where is the *improvement* in cases like these? Where the benefit, but to the pockets of those who sell?

It is admitted that for *size*, *productiveness* and *great beauty*, no Strawberry on this continent is superior to *Hovey's Seedling*. It is altogether the best adapted for general culture; and, if with its other qualities we could say it had the requisite *flavor*, it would stand without a rival. The improvement here, would be to supply what was wanting *by a cross with such varieties as possessed high flavor;* and not a few such are cultivated. An attempt of this kind requires some patience and care. The principle is obvious, and of general application with other different sorts; nor is there a

doubt but that the most gratifying success would ultimately reward the labors of the cultivator. Mr. A. says his seedlings are superior to *any* heretofore cultivated; so says Mr. B., and so says everybody else who has raised seedlings. But is it so? Are *all* the seedling Strawberries, which have been so liberally eulogized by the *raisers* of them, better than any now grown? Are they *as* good? "Is there good reason, aside from their *newness*, why they should supplant old sorts in our gardens?" In what respect do they claim admission among standard Strawberries? These queries of Mr. BEECHER are pertinent. We know that "the fever for originating small fruits" has set in, in many quarters; and we "shall be deluged with novelties," of which nine-tenths will be no better, if so good, as their predecessors.

Do those gentlemen, who raise and advertise their seedling fruits, mean to say that they are hybrids,—true crosses of estimable varieties, with a view of securing the *valuable* properties of both? We have said already, that impregnation is not the *easy* process some imagine it to be. To apply the pollen of one flower to the stigma of another, appears simple enough; but, simple as it is, a few precautions are absolutely necessary. Whether it be "silly twattle" or not, we assert the pollen to be the *male parent*—the stigma, the *female*. "The female flower must be deprived of her stamens, before they burst and disperse their pollen; and as soon as the stigma is glutinous enough to hold it fast, the pollen must be applied *with care*. Should this care *not be taken*, the stigma is very likely to be inoculated with the pollen of her own, or some other flower, and then the pollen which it is intended to use *will not take;* for it is to be borne in mind, that a stigma *once* inoculated cannot be inoculated again. From want of these precautions, people are continually fancying they have obtained hybrids, when they have only gained *natural* seedlings." This is the process of hybridizing where improved *flowers* are sought after; and the principle is the same in every attempt to obtain a new and valuable fruit. It is making progress at a snail's pace to save seeds "with one's own hands," though they be "of every estimable variety," unless they have been *judiciously and carefully impregnated*, to the end that the good shall become better. The improvement must be looked for with a reasonable degree of certainty, and not left to be the result of the merest chance, which it must necessarily be in selecting one or two natural seedlings from, perhaps, ten or twenty thousand.

The Hovey's Seedling lacks *flavor;* how shall *this* quality be imparted to it? It is a pistillate plant, and must be impregnated by some other (staminate,) to produce its fruit. Proceed thus: plant one dozen Hovey's (fine strong plants,) in a frame—four rows—three in a row. Between these set out three or four equally fine plants, of *Alice Maude*, *Swainstone*, or any other variety having *size* and *flavor* to recommend it. Grow these plants with due care, and when the lights are off or open, protect them from any intermixture from other sorts by a covering of gauze; thus excluding bees or other insects. When the fruit on the Hovey's, is fully ripe, gather it and wash out the seeds; plant them at the proper time, keep them distinct from all others, grow them as carefully as possible, and look for the result. A proceeding like this is but the index to all others, excepting that in some cases, the fertilization must be artificially effected between different varieties; otherwise they will impregnate themselves, and thus defeat the object contemplated.

Of course, every precaution will be exercised to ensure success; and our labors are frequently rewarded by the production of varieties every way better than their parents. Hybrids generally partake most strongly of the parent *furnishing the pollen;* it is, therefore, of very great consequence to make the selection with this fact strongly impressed upon the mind.

What can be done for the Raspberry? This is rather a difficult question to answer; for, among the large list of sorts cultivated, there are qualities to be found pretty nearly suited to various tastes. The writer in the *Gardeners' Journal* does not think that as much improvement is to be looked for with this fruit as with the others. In size, appearance, and flavor, the *Fastolff*, Franconia and *Antwerps*, when well grown, are as good as Raspberries need be. Whether or not "the God of Nature planted but one edible species in the eastern hemisphere," is not here a matter of any consequence; the cultivators of Europe have done their part in *improving* what they had; and our *best* varieties, at present, are of foreign growth. True, there are some American varieties said to be "beautiful and estimable," and of a peculiar colour; but they are not *better* than those specified—perhaps not so good. Something very promising may be anticipated by those who read, that a Long Island nurseryman has "numerous seedlings, *partly hybridized*, of the American White, Ohio Monthly, Franconia, and Red and White Antwerp varieties." It would be interesting to know *how* this partial hybridization was effected, and whether or not there was a definite object sought for in the experiment.

In two particulars, the Raspberry can certainly be very much improved, viz., in the solidity or firmness of the berry, and lateness of bearing. The season of this fruit, with the finest kinds, is much too short; and when fully ripe, they do not bear carriage as well as some others not quite as much esteemed. Very interesting products might be reasonably anticipated, from fertilizing the Antwerps, Fastolff and Franconia, with the English double bearing Red, and the true Alpine. Important results are far more likely to follow when *artificial* means are resorted to, than when the seed is planted *without* it; and the grower relies altogether on the chances of his seedling lottery. He *may* obtain a prize; but it is a thousand to one that he does not.

What can be done for the Gooseberry? If the question were, what *has* been done in America, we should be obliged to say—nothing. In England, this fruit is far more esteemed and extensively grown than with us. An improvement would certainly be, to impart high flavor to the larger sorts. Quality is as much a desideratum as size, and much more of a recommendation with amateurs generally. New forms, lateness of maturity, and increased size, would all be regarded as improvements; and "these results are only waiting the well directed efforts of some zealous individual to meet a full realization." In many of our gardens this fruit mildews badly; the causes—poor soil, and a want of uniform moisture at the root. The remedies are obvious.

What can be done for the Currant? Why cannot these be grown as large as grapes, and as sweet, too? These properties would indeed be improvements, and give to the fruit a character it has never yet possessed. The largest varieties at present cultivated with us, will bear no comparison with even the smallest grapes; and their flavor is more or less acid. The *Gondouin Red*, *Cherry Red*, *Haughton Castle*, and *Goliah*, are *new* varieties, not imported that we know of, and not of an established charac

er in England. We have grown the *Cerise de Tourés* one season, but cannot yet speak of it with confidence. It is figured in the "*Annales De Flore et de Pomone*," for February, 1844, and if correctly represented, is the largest Currant known. This variety, with the Provence's, and the Large French White would make excellent breeders; and Currants as large as "small marbles" may yet be produced.

Now if amateurs, gardeners and nurserymen, will but give the matter of the improvement of small fruits their *earnest* and *well directed* attention, results of the most gratifying character would soon be produced. "Many persons are deterred from experiments of this kind, under the impression that it is a work of magnitude. This is, to a great extent, erroneous. The idea has indeed gone forth, and seems to be widely dispersed, that the per-centage of improvement among seedling plants is infinitessimally small, and that a very large number must be grown to offer even a remote chance of success; but this idea, doubtless, *owes its origin to the too common practice of saving seeds promiscuously, without regard to impregnation. From such a progeny, little indeed may be expected: it is a waste of time and labor to act thus, with the view of originating improved varieties of any kind of fruit; and one carefully fertilized seed is worth a hundred so obtained.* If, however, the thing be attempted on principle, it becomes an easy task; and not only is the labor lightened, but the chances of a satisfactory result are at the same time greatly increased. Suppose one hundred gardeners were each to fertilize one Strawberry blossom, according to their own ideas of what blending of varieties would constitute an improvement; the trouble of doing so would be so trifling as not to be worthy of mention, while it is probable that even the first results would be important. But in these matters we must not be satisfied with first results; a second or third cross of the hybrid with the male parent, (if the latter be well chosen,) would most likely result in considerable further improvement."

"The practice under consideration may, however, be perverted. The perversion we refer to, is that of naming and distributing seedling fruits that really do not possess any property superior to those of older and well known kinds. This must always be deprecated. If those who raise seedling fruits do not know their true worth, they should submit them to competent judges. The probability of varieties, perhaps good in themselves, but not better than the older sorts, being passed off as possessing superior properties, is so great, that every raiser of seedling fruits should set his face against the practice. Our fruit lists are already encumbered with too many such—all not a jot better, and *many actually worse*, than those whose place they would occupy. In cases where varieties are obtained that really do possess superior, though slightly improved properties, it would be better to *retain such as breeders*, than to propagate and sell them for general cultivation. The horticultural world need not be troubled with results *until something decidedly good and distinct has been obtained.*" We go further, and say—that these novelties should never be sold, or in any way disseminated, unless *proved* to be better than the *best* varieties now cultivated. A nurseryman has justly remarked, in his Catalogue for 1847, that "*nothing can be more silly than for each one who raises a seedling Strawberry, to forthwith announce it as 'superior to all others, &c.' when they have seen but few of the best varieties.*" We fear, however, that silly though it be, some nurserymen have done the very thing so judiciously condemned.

These things have no good tendency; on the contrary, they are only productive of evil.

Experimental hybridization is best conducted on a limited scale. One case of cross-breeding, carefully wrought out, *on correct principles*, is more pregnant with really useful and valuable consequences than a thousand promiscuous ones, or a hundred carelessly prosecuted, while, of course, the labor and trouble attending the experiments, becomes lessened in proportion.

Thus reasons an able writer. We have italicised a few remarks to give them force, and somewhat altered the phraseology of a line or two. What *has* been done for the small fruits, and what *may* be done by our gardeners and amateurs, time will show; and, it will also show, that a large majority of the so called magnificent and incomparably superior varieties—so styled by the authors of their origin—are not worth growing.

WM. W. VALK, M. D.

Flushing, L. I., December 30, 1847.

NEW OR RARE FRUITS.

I. THE MELON APPLE.

*Norton's Melon,** } of some.
Watermelon, }

AMONG all the new dessert apples that have been originated in this country, within the last few years, and the number is not small, we consider two varieties, which have been introduced to public notice from Rochester, N.Y., as especially deserving the attention of all cultivators. The first of these is the *Northern Spy*, with which our readers are already familiar; the second is the *Melon*. Both have added to usual good qualities, one characteristic excellence in great perfection, viz., exceeding freshness of flavor, juiciness, and crispness. The *Northern Spy* is universally popular, where it is known, as a late winter, or spring fruit; and the *Melon* apple deserves to be held in equally high estimation as one of the most delicious and valuable of early winter fruits.

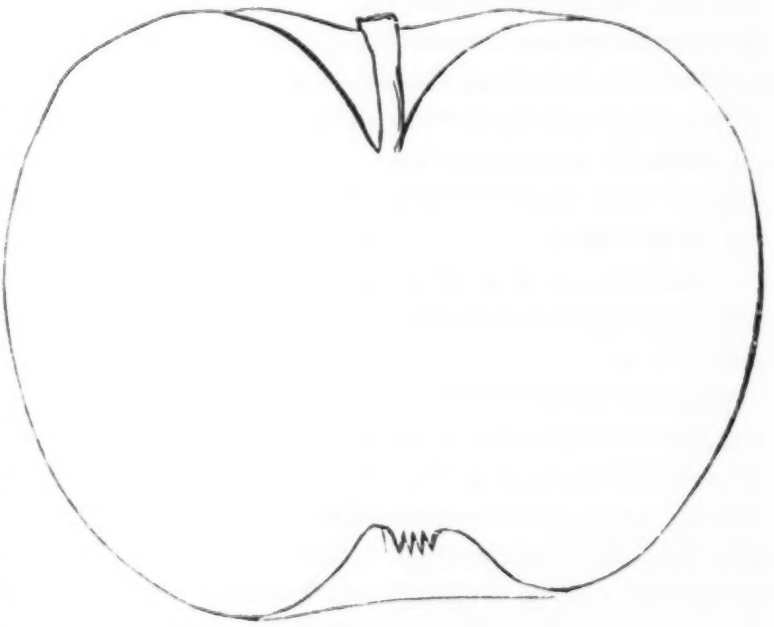


Fig. 44.—*The Melon Apple.*

Specimens of *Melon* apple were sent us this autumn by WM. R. SMITH, of Macedon, N. Y., who is familiar with all the finest standard apples grown in this country. In a subsequent letter, Mr. SMITH says, in reply to our high commenda-

* This fruit was first noticed by Mr. BARRY, in the *Cultivator* as *Norton's Melon*. It is also called, by some cultivators, the *Watermelon* apple; but the latter name is applied to another variety.

tions of it—"It is difficult to form a correct judgment of a fruit from a few specimens. You need to be *domiciled* in its company for a month or more, to give time for the novelty to wear off, and to ascertain whether first impressions are permanent. We have been using this fine apple for some time; and, among a large variety of first rate kinds, we place this at the *head* of the list of *early winter* apples."

The oldest known trees of the Melon apple, are in the old Chapin orchard, East Bloomfield, N. Y. Oliver Chapin, jr., has informed our correspondent just quoted, that his father used to say, that "the *kind* was brought from Salisbury, Connecticut." But, we understand, there is no fruit of this kind known in Connecticut; and from certain strong traits of resemblance between this and the *Northern Spy* apple, which originated in the Chapin orchard, we suspect that they are both seedlings from the same source.

The following is a correct description of the Melon apple:

Fruit of medium or large size, roundish-flattened, pretty regularly formed, surface shining, but a little uneven. Skin fair—the gound colour of a pale yellowish white, prettily marked with broken streaks of pale purple in the shade, and striped thickly with rich dark purple on the sunny side. Stalk about three-fourths of an inch long, rather slender, inserted in a wide round cavity, which is marked with greenish russet. Calyx closed, set in a deep basin, which is wide, finely plaited at the bottom. Flesh white, fine grained, at once crisp and tender, and exceedingly juicy, (somewhat like a watermelon in these respects,) and with a remarkably refreshing, sprightly and delicious flavor—a fine mingling of sweet and acid. Core rather close; seeds rather small, broad and black. Season, October to December.

Altogether, we regard this fruit, in point of form, size, beauty, and refreshing delicious flavor, as one of the first dessert apples. Amateurs may, we presume, procure trees of Mr. Smith, of Macedon, or Elwanger & Barry, of Rochester, N. Y.

II. THE TOMPKINS APPLE.

A large, handsome and productive autumn apple; superior in flavor to the Porter, and nearly equal in this respect to the Fall Pippin. It is, we learn, a native of Tompkins county, in this state, and is well known in Ithaca, whence it was first introduced to our notice by Mr. Chas. Hamilton, nurseryman, of Canterbury, Orange county, New-York. We commend it, with

Fig. 45.—*The Tompkins Apple*

confidence, to the notice of amateurs and collectors of good fruit.

Fruit large, oblong, rather angular, and slightly ribbed near the eye. Skin smooth, golden yellow at maturity, with numerous scattered gray dots. Stalk short, rather slender, planted in a cavity which is deep and rather narrow. Calyx small, closed, set in a deep, plaited basin. Core large, hollow, in which the small seeds rattle when the fruit is shaken. Flesh white, tender, of a lively, agreeable and rather rich sub-acid flavor. October and November.

Fig. 46.—*The Beurre d'Anjou Pear.*

III. THE BEURRÉ D'ANJOU PEAR.

A noble fruit, we believe of French origin. We gave a brief description of it in our work on Fruits, and remarked, that though placed as, perhaps, synonymous with the *Brown Beurré* by THOMPSON, it had been proved, in this country, to be quite distinct.

To the President of the Massachusetts Horticultural Society, we owe the first introduction of this fruit to American gardens. It has borne, in his collection, now for five years. We have, ourselves, tasted specimens three years successively; and can agree with Col. WILDER in considering it one of the very finest new autumn pears that has yet been received from European collections. Its large size, productiveness, and the fair appearance, and delicious flavor of the fruit, cannot fail to make it worthy of a trial, even in small and select collections of fruit, in all parts of the country. It is in perfection in October and November; and the fruit keeps well.

NOTICES OF NEW OR RARE PLANTS.

FROM THE FOREIGN PERIODICALS.

THE gardening world is certainly indebted to Mr. ROBERT FORTUNE, the collector of the London Horticultural Society, for some of the most valuable acquisitions. First in universal value, among all the plants brought out by him from China, we may rank some hardy shrubs, which, having been distributed by the Horticultural Society, are now to be seen among the finest novelties of the shrubbery in England, and are just beginning to find their way to the United States. Of these the three following shrubs may be particularly recommended to the attention of our readers, as likely to prove exceedingly ornamental, and quite hardy in the latitude of New-York.

VIBURNUM MACROCEPHALUM. *Great clustered Snowball.* We find a description of this species, accompanied by a large plate, in VAN HOUTTE'S *Flore des Serres.* It was

Fig. 47.—*Great Clustered Snow-ball.*

found growing in the gardens about Chusan, China, where it forms a shrub or tree 20 feet high. It flowers every year in May — producing its enormous clusters, which equal those of the old garden *Snowball*, or "Guelder Rose," in purity of colour, and far eclipses them in size and beauty. Each blossom is more than an inch across, and the clusters measure 8 or 10 inches in diameter. The leaves are regularly oval, with short petioles, and are about 3 inches long. It flourishes in the open border in the same soil as the common Snowball, and M. VAN HOUTTE considers it one of the most beautiful additions lately made to the shrubbery.

FORSYTHIA VIRIDISSIMA. *The Deep-green Forsythia.* This very ornamental shrub is a great favorite with the Chinese, and is found in all the gardens of the rich in the north of China. Mr. FORTUNE describes it as growing 8 or 10 feet high in that part of the Empire, forming a compact, deep-green, deciduous shrub, with long, opposite leaves, which emit a slight balsamic odour, and from their smoothness and rich, deep tint, are very handsome. It is remarkable in autumn for the number of large, prominent buds, which are scattered along the young shoots produced the summer before. Early in spring these buds, which are flower-buds, gradually unfold themselves, and present a profusion of bright yellow blossoms all over the shrub, which is highly ornamental. These golden flowers contrast happily with the rich crimson of the *Pyrus japonica*, as they bloom at the same time. It is easily propagated by cuttings or layers, and is a free growing plant in the open border.

WEIGELA ROSEA. *The Rose-colored Weigela.* This exquisite shrub is one of Mr. FORTUNE'S prizes from the Mandarin's garden. We are very desirous to prove it in the United States, as we are confident, from its growing in the north of China, that it will prove quite hardy here. It has bloomed in the garden of the London Horticultural Society, and they have published a plate in their *Transactions*, (of which the accompanying cut is a diminished copy.) This plate represents it as bearing numerous clusters of lovely flowers, each blossom more than an inch in diameter, pure white within, and deep rose-colour without.

"When I first discovered this beautiful plant," says Mr. FORTUNE, "it was growing in a Mandarin's garden, on the island of Chusan, and literally loaded with its fine rose-coloured flowers, which hung in

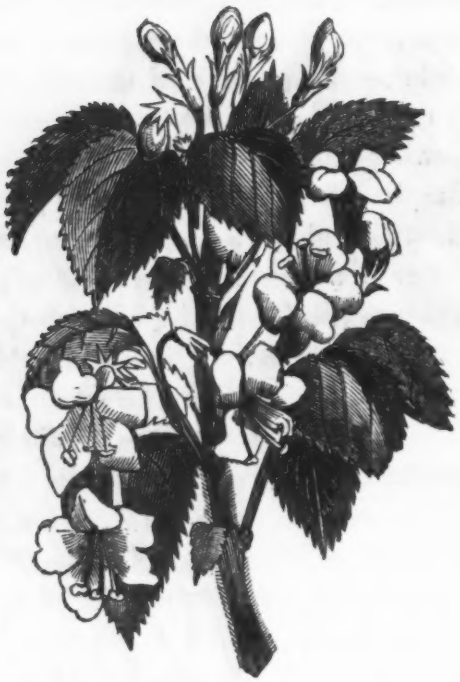


Fig. 48.—*The Rose-coloured Weigela.*

graceful bunches from the axils of the leaves and the ends of the branches. Every one saw and admired the beautiful Weigela. I immediately marked it as one of the finest plants of northern China, and determined to send plants of it home in every ship, until I should hear of its safe arrival.

"It forms a neat bush, not unlike a Syringa (*Philadelphus*) in habit, deciduous in winter, and flowering in the months of April and May. One great recommendation to it is, that it is a plant of the easiest cultivation. Cuttings strike readily any time during the winter and spring months, with ordinary attention, and the plant itself grows well in any common garden soil. It should be grown in this country, as it is in China, not tied up in that formal, unnatural way in which we frequently see plants brought to our exhibitions, but a main stem or two chosen for leaders, which, in their turn, throw out branches from their sides, and then, when the plant comes into bloom, the branches, which are loaded with beautiful flowers, hang down in graceful and natural festoons."*

Dielytra spectabilis. *Showy Fumitory.* This plant is, beyond all comparison, the handsomest of the natural order Fumeworts. It does not appear to have been introduced into England in a living state, until Mr. Fortune brought it home from China.

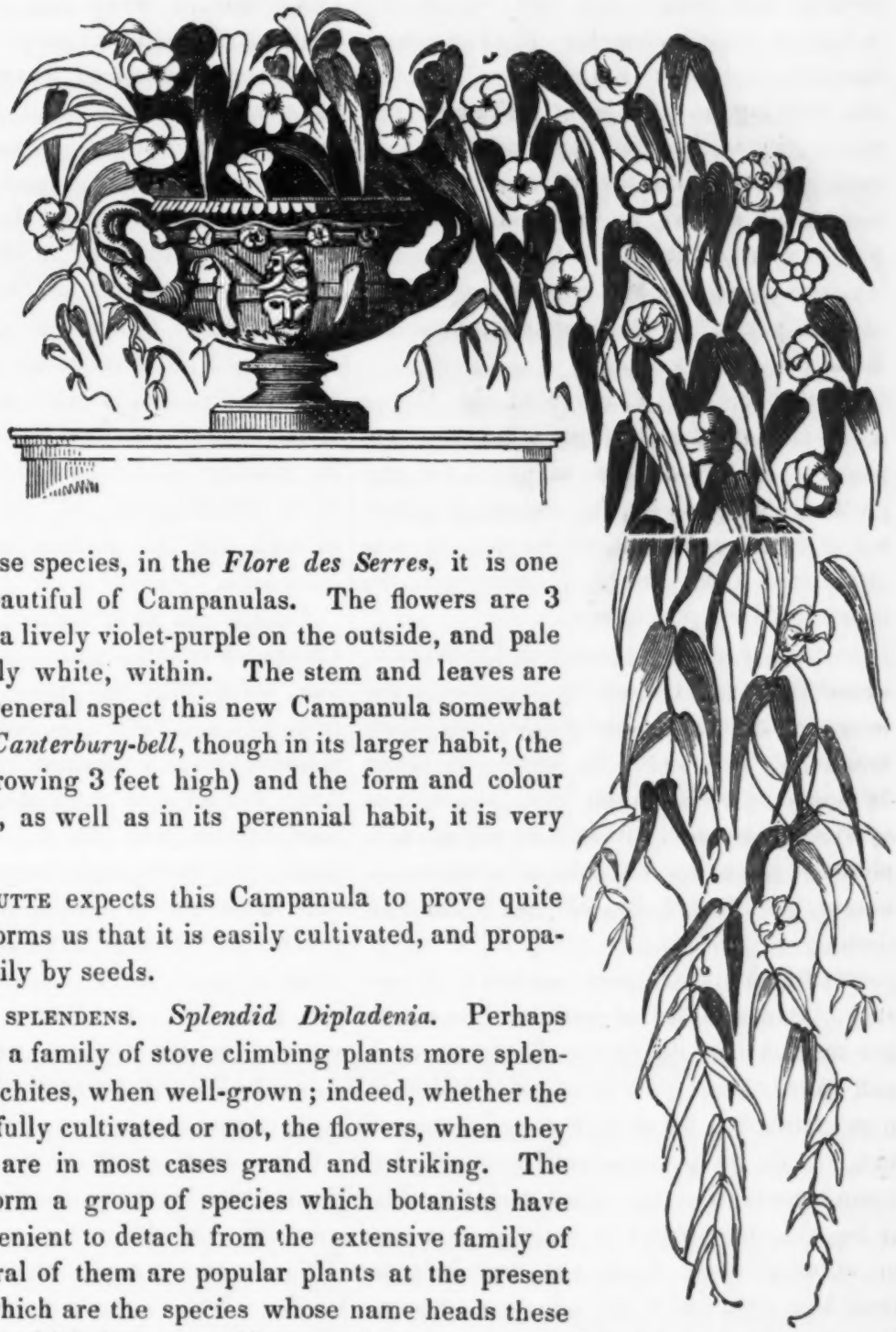
When well-grown, its stems are 1½ foot high, and have three or four axillary racemes of beautiful flowers, each raceme being from 4 to 6 inches long. The flowers are full an inch long, and nearly ¾ wide, with two saccate petals, of a delicate rose colour, and the intervening ones white, with a purple tip.

This is one of the plants of which the Chinese Mandarins are so passionately fond, and which they cultivate with so much pride in their little fairy-like gardens. Its Chinese name is *Hon-pak-Moutan-wha*, or "red and white Flower of Moutan." The Chinese botanists do not draw the characters of their genera from the flowers like ourselves, but from the *habit* of the plant. In this the leaves are disposed like those of the Tree Pæony, (*P. Moutan*) and the colours of the flowers are red and white. The *Dielytra spectabilis*, more nearly resembles, in growth and culture, the well-known herbaceous plant, *D. formosa*, than any other species, but is a much more beautiful ornament to the flower garden.

As Mr. Fortune informs us that this charming plant grows as far north as the frontiers of Siberia, there can be no doubt that it will prove perfectly hardy in North America.

Campanula nobilis. *The Noble Campanula.* Judging from the plate of this

* We trust that these three free-growing and very ornamental Chinese shrubs, the *Forsythia*, *Viburnum* and *Weigela*, will soon be propagated and offered for sale by our leading nurserymen. We observe that they are now to be had of the London commercial gardeners, at three shillings sterling each.—Ed.



fine new Chinese species, in the *Flore des Serres*, it is one of the most beautiful of Campanulas. The flowers are 3 inches long, of a lively violet-purple on the outside, and pale purple or nearly white, within. The stem and leaves are hairy, and in general aspect this new Campanula somewhat resembles the *Canterbury-bell*, though in its larger habit, (the flower-stalks growing 3 feet high) and the form and colour of its blossoms, as well as in its perennial habit, it is very distinct.

M. Van Houtte expects this Campanula to prove quite hardy, and informs us that it is easily cultivated, and propagates itself easily by seeds.

Dipladenia splendens. *Splendid Dipladenia.* Perhaps there is hardly a family of stove climbing plants more splendid than the Echites, when well-grown; indeed, whether the plants are skilfully cultivated or not, the flowers, when they are produced, are in most cases grand and striking. The Dipladenias form a group of species which botanists have found it convenient to detach from the extensive family of Echites: several of them are popular plants at the present day, among which are the species whose name heads these remarks, (and which is—not well—represented in the engraving,) *D crassinoda*, a good deal like it, but perhaps a better species on the whole for cultural purposes; and *D. atropurpurea*, which, with the same habit of growth, has flowers of a rich deep purplish tint.

Fig. 49.—*Splendid Dipladenia.*

Our present subject may be popularly described as follows:—Stem shrubby, vigorous, and growing to a considerable length, smooth, and round. Leaves nearly stalkless, wavy, somewhat leathery, elliptic-acuminate, with a heart-shaped base, from

four to eight inches long, and from one and a half to three inches broad; they are pubescent, especially on the under side, and the veining is prominent. Flowers very showy, in axillary four to six-flowered racemes, longer than the leaves; the tube of the corolla is about an inch and a half long, with a large spreading limb of five roundish, rose-coloured lobes, each having a small oblique point; these blossoms are produced in the summer months.

The species is a native of the Organ mountains of Brazil, from whence it appears to have been first obtained for our gardens by Mr. Lobb, the botanical collector to Messrs. Veitch, of Exeter: it was introduced about 1841. It belongs to the natural order Apocynaceæ.

In cultivation, this species of Dipladenia, in common with the others, requires stove temperature, and a moist atmosphere when making its growth; it is, moreover, much benefited by *mild* bottom heat, that is, heat applied to its roots. Being a strong grower, plenty of pot-room must be allowed to obtain a good plant, but the pots must be thoroughly drained; a compost of equal parts turfy loam and peat, opened if necessary by the addition of sand, will be a proper medium for its roots. If grown in a pot, spiral training round a pillar-trellis is most suitable; or should any devotee of flat, shield, or peacock's-tail trellises, become possessed of the plant under notice, if he will but attempt to train it over one or other of these forms—it may help to lead him to a better taste in this respect. It may be increased by cuttings, planted in sand and placed in a mild hotbed, where they may be kept moderately close until rooted. [*Hort. Mag.*]

Pæonia Moutan picta. *The Painted Tree Pæony.* A new variety of the Tree Pæony, sent from China in 1844, by Mr. Fortune. Leaves dull bluish-green, not veined or tinged with purple; in breadth, less than some varieties: flower, the size of *P. Moutan rosea*, and with something of its appearance, but more semi-double: petals with a rose-colored ground, streaked, stained and veined with rich deep rose, towards the edges, especially in the inside; rather ragged at the points, something in the manner of Parrot Tulips. It appears to be as hardy as *P. Moutan rosea*, and to require a rich sandy-loam to grow in, but protection is advisable in spring. It will be increased by grafting on the roots of *Pæonia albiflora*, or by dividing the old plants when large enough, and in a dormant state. *It is very handsome.* [*Journal of the London Hort. Soc.*]

Hollböllia accuminata. This is a new evergreen twining plant, from the East Indies, with quite the habit of *H. latifolia*, from which it differs, in having very taper-pointed leaflets, racemes whose stalks are much shorter than the leaf-stalks, and purplish flowers, not half the size: like that plant, it is deliciously fragrant. Hitherto, only male flowers have been produced.

It has been treated as a hardy green-house climbing plant, but it is probably *hardy*. It grows freely in a mixture of sandy-loam and rough peat, and is increased by cuttings. Its sweet-scented flowers, resembling those of the orange in perfume, and nearly evergreen foliage, make it a very desirable plant, either in the green-house or the open air. [*Journal Hort. Soc.*]

Thibaudia pulcherrima. *Beautiful Thibaudia.* This superb green-house plant, figured in the *Flore des Serres* for July, 1847, is well calculated to excite the admiration of all lovers of showy and half-hardy exotics. It is a vigorous growing shrub, with large and thick lanceolate leaves, and pale, smooth branches, which, at the flowering season, are thickly loaded or

studded with clusters of beautitul bell-shaped flowers. Each of these flowers is an inch long, richly variegated and marked with crimson and pale green. The internal structure of the flower is both elegant and curious.

This plant comes from Northern India. Van Houtte informs us that, planted out in a Camellia house, this plant, with him, two years planted, began to bloom in December, and furnished a succession of blossoms until the middle of April. "Planted out in the border of a conservatory, the *Thibaudia* will be one of its principal ornaments, both by the great number and the elegantly varied colour of its flowers."

Liebigia speciosa. *Elegant Liebigia.* This most elegant new plant, from Java, has been named in honour of Baron Liebig, the great chemist. It is a new genus—to the ordinary observer, something between a *Gloxinia* and a *Pentstemon.* The flowers are parti-coloured, pure white, exquisitely marked with deep blue, on the upper part of the corolla. The leaves are large, oblong. accuminate: the plant grows quite erect, with a branching stem, and its handsome habit, and the great number of blossoms which it bears, in fascicles, at every joint, render it a very attractive object. It grows freely in rich soil, with the same culture as Gesneras and Gloxinias, and blooms during a considerable part of the season. We hope soon to hear of its introduction into the United States.

Cereus grandiflorus maynardi. *Maynard's Cereus.* A very fine new hybrid Cereus, raised in England, which we find figured in *Paxton's Magazine.* It is a true cross, obtained by fertilizing the pistil of *Cereus speciosissima*, with the pollen of *C. grandiflorus*, the Night-blooming Cereus. The properties of the two parents are strikingly embodied in the offspring—for Maynard's Cereus has the roundish stem and peculiar habit of growth of the Night-blooming Cereus, with the rich colour of its mother plant. Unlike the Night-blooming Cereus, and like *C. speciosissimus*, the flowers last several days; and they are produced in all the abundance which distinguishes the latter variety. The diameter of the flowers is nine or ten inches.

HINTS AND DESIGNS FOR RUSTIC BUILDINGS.

It must be a very highly finished scene, and a garden where all the details are in a very decided and ornate style of art, in which marble temples, statues, or even highly finished pavilions and summer-houses, may be introduced with harmony and propriety.

Hence, it is only in the first class of country residences, where the mansion or villa, and all its accessories, are in a high style of art, that classically embellished structures, or sculptural ornaments enter, with good taste, into the decoration of the garden or landscape scenery.

But the more humble and simple cottage grounds, the rural walks of the *ferme ornée*, and the modest garden of the suburban amateur, have also their ornamental objects and rural buildings—in their place, as charming and spirited as the more artistical embellishments which surround the palladian villa.

These are the seats, bowers, grottoes and arbors, of rustic work—than which nothing can be more easily and economically constructed, nor can add more to the rural or picturesque expression of the scene.

Those simple buildings, often construct-

ed only of a few logs and twisted limbs of trees, are in good keeping with the simplest or the grandest forms of nature. However wild the scene, wherever the foot-path of the rambler is seen, there the rustic seat is never obtrusive or unmeaning—in the quiet nooks of the garden, amid its flowers and shrubbery, the rustic-covered arbor, partly clothed with climbing plants, is an object of beauty. The terminus of a long walk, otherwise unmeaning, is in no way more easily rendered satisfactory and agreeable, than by a picturesque place of repose; and the charms of a commanding hill, where the eye wanders over a grand panorama, is rarely so happily improved, as by being crowned with a rustic pavilion, which seems as the shelter and resting place of modern Gilpins, "in search of the picturesque."

The construction of ornamental rustic buildings is so easy, that any workman, accustomed to the use of the saw and hammer, may, with a little practice, soon become a "master builder." The chief merit of these structures lies, of course, in the design or plan. As a contribution to the stock of ideas of the novice in rustic work, we have offered a few sketches in our Frontispiece of this month—all of which may be improved upon by the adept in rustic buildings.

Fig. 1, is a design for a RUSTIC WELL-HOUSE; *Fig.* 2, is an octagonal RUSTIC PAVILION for an eminence; *Fig.* 3, is a RUSTIC ARBOR for a nook in the shrubbery; and *Fig.* 4, is a RUSTIC ALCOVE, to be placed at the end of a garden walk.

Two or three practical hints here, may be found of service to the beginner. Most rustic work is quite perishable, when fully exposed to the action of the weather, and particularly to storms, in this climate. But if all buildings of this kind are protected by a *close roof*, that *projects* on all sides from one to three feet, this rustic work will endure for many years in a perfect condition.

When rustic work is necessarily exposed to the weather, as in the case of open seats, bridges, and the like, the bark should be stripped from the branches composing it, and a couple of coats of *bark-coloured* paint applied to the surface of the limbs. What is still better, is to construct exposed pieces of rustic work of trunks and branches of the Red Cedar, (*Juniperus virginica*) a tree very common in the valley of the Hudson, and some other parts of the country. This, either with or without the bark, will endure many years.

The favorite mode of covering rustic buildings in England, is to *thatch* them with straw, (as represented in *Figs.* 2 and 4.) This, if neatly done, has a good effect. Another very picturesque roof, is made by overlaying a common roof of *matched* floor-plank, with pieces of oak or hemlock bark, as shown in *Fig.* 3. The rustic *well-house*, *Fig.* 1, is roofed with *shingles*, the lower ends of which are pointed before laying them on, so as to form a diamond pattern.

The "dead wall," or interior portion of rustic buildings, is usually ornamented or finished by a sort of *mosaic work*, formed of small, strait poles, with the bark on; these poles are *halved*, and then nailed on a ground work of rough boards, with the bark side out. If poles of different species of trees, with strongly contrasting barks, such as the white and black birch, are chosen, and a little taste employed, a very pretty effect may be given to this kind of rustic inlaid work.

Another very complete mode of finishing the interior of a rustic building, is to line it throughout with the fine soft evergreen moss, to be found in thick woods. For this purpose, narrow, slender, strait poles or

shoots are chosen; one of these is nailed on the ground work, a line or layer of the moss closely laid upon it, and one end rammed beneath it, the other projecting out beyond it; then another rod is nailed down above this, and again a layer of moss. This is repeated till the surface to be covered is completed. The whole appears thickly tufted with moss, which is shorn to an even surface, and being held in its place by the rods, it makes a very pretty and unique drapery for the walls.

In a country with the long winters of the Northern States, there are frequently leisure hours, when rustic work may form an agreeable occupation and amusement for the gardener; and we leave the subject, with these few hints, in his own hands.

ON THE BLIGHTS OF THE PEAR TREE.

BY T. W. HARRIS, CAMBRIDGE, MASS.

It seems to have been taken for granted, by many persons, that the pear tree is subject only to one kind of blight. Hence have arisen the conflicting theories and speculations that have been published on this subject. Having no theory to maintain, and no speculations to offer, but such as are founded on facts, I propose to show that *insect-blight* is a disease distinct from *fire-blight* and *frozen sap-blight*.

By the term *insect-blight*, as here used, must be understood the sudden withering of the leaves, and the death of the limbs of the pear tree in summer, occasioned by the internal attacks of one or more of the insects, called *Scolytus Pyri* by Professor Peck. This kind of blight is common in New-England; but it does not appear to exist, or to have been observed, in the western states, where, however, blights of the pear tree, somewhat similar in progress, and equally fatal in termination, prevail more or less every year. Blights, which are not the result of insect attacks, inasmuch as insects have never been detected in the blighted limbs, occasionally affect pear trees in New-England. Some of my own trees have been thereby destroyed; and the most careful examination has failed to disclose any trace of insect depredation in them. On the other hand, numerous opportunities for seeing the effects of insect blight, and of dissecting specimens of *Scolytus Pyri* from the blighted limbs, enable me to declare confidently that the diseases are specifically distinct from each other; as much so as small-pox and measles. It is not my purpose to discuss the question, whether fire-blight and frozen sap-blight, or winter-blight, be identical; the contrast between them and insect-blight being what is now to be attempted.

The effects of insect-blight begin to appear in June, and continue through July; but the foundation of the disease may be traced to the operations of the parent insect during the previous summer. If all the limbs that were killed by insect-blight in the summer of 1847, could have been examined during the latter part of the summer of 1846, there would have been found insects in them, in the larva or grub state, eating their way from the buds, where the eggs were deposited, inwards, through the bark and sap wood. These insects continued the work of destruction till the following spring, when they were transformed to beetles, and finally came forth from their bur-

rows. The insects, therefore, preceded the appearance of the disease nearly a twelvemonth; from which follows the inevitable conclusion, that the blight of the limbs was the natural consequence of their previous attacks.

To suppose that the female *Scolytus Pyri*, by anticipation, deposits her eggs only on those limbs which are to become affected by fire-blight, or by frozen sap-blight, is unwarrantable; because none of these insects have been found in limbs that have perished by these kinds of blight, and consequently none could have existed in them during the previous summer. Hence, it follows that these blights are not caused by the attacks of *Scolytus Pyri*.

Observation sufficiently proves that this insect attacks young and thrifty trees, exhibiting no visible signs of disease or decay. As the young *Scolytus* is found in limbs that were apparently in a thrifty state during the previous summer, the parent insect, though not indued with the power to foresee frozen sap-blight during the following winter, or fire-blight the next summer, must have had some instinctive perception of the nature and actual condition of the tree on which she deposited her eggs; and, in performing this act, she would not have been left to blind chance. As the *Scolytus* lays her eggs on sound and thrifty limbs, it follows that she does so from choice; and, hence, it is fair to conclude that she would not voluntarily lay her eggs on unhealthy or diseased limbs, so long as she could find those that were healthy. Therefore, the opinion is untenable that the insects, found within the diseased limbs of the pear tree, are not the cause of the disease, but that they are attracted thither by the previous existence of the disease.

It should be remembered that the *Scolytus Pyri* requires a year, or thereabouts, to complete its transformations. In those limbs that perished by insect-blight in the summer of 1847, the seeds of the fatal disease were sown by the parent *Scolytus*, in the summer of 1846. Those limbs that perished by fire-blight during the last summer, according to the theory of Mr. Cox and Mr. Ernst, must have been sun-struck during the same summer. Those limbs that perished by frozen sap-blight, according to the theory of Mr. Beecher, had their death blow dealt to them during the previous winter. If the theories advanced by the above named gentlemen be correct, as to the time of attack, the specific difference in these three cases of disease is obvious. The occurrence of the insects in limbs destroyed by fire-blight, or frozen sap-blight, would be an exception to the natural order of things. But, even on the unproven and unnatural supposition that insect-blight might, for a time, coexist with other blights, it is evident that the attack of the insects must have preceded the disease. Insect-blight, therefore, differs essentially and specifically from fire-blight and frozen sap-blight, in origin and duration.

"What can we reason but from what we know."

Had the history of the *Scolytus Pyri* been well known and duly considered, the blight produced by the attacks of the insect would never have been mistaken for fire-blight, or frozen sap-blight. The mistake has arisen from taking too much for granted, and from not considering the possibility or probability that diseases, having some symptoms in common, and alike ending fatally, might be really and essentially distinct from each other.

It may not be generally known that apple, apricot and plum trees are attacked by the *Scolytus Pyri*, though less frequently than pear trees. In the latter part of May,

1843, a piece of the limb of an apple tree, affected by the *Scolytus*, was brought to me for examination. It was twenty-eight inches in length, and three quarters of an inch in diameter at the lower end. Its surface bore the marks of twenty buds—thirteen of which were perforated by the insects; and, from the burrows within, I took twelve of the blight-beetles in a living state; the thirteenth having previously been cut out. In July, 1844, I took one of these beetles on a plum tree; and, in August following, I found a large number of them in some pieces of a blighted branch of the apricot.

To check the increase of this kind of insect-blight, it is not enough to cut off the infected limbs. The insects contained in these limbs must be destroyed; for, if they are suffered to make their escape, they will certainly continue to propagate the disease. To make sure of the destruction of the insects, every limb affected by them should be cut off and immediately burned, as soon as the existence of the disease is discovered.

I am, dear sir, yours very truly,

THADDEUS WM. HARRIS.

Cambridge, Mass., Jan. 7, 1848.

.....

[There is no vegetable malady in which the cultivator of fruit trees, in America, is so much interested at present as the pear tree blight. To wage successful war against it, nothing is so important as to have a clear and distinct idea of the different forms of the disease, and their origin.

The foregoing remarks, from Dr. Harris, whose able work on our "Insects Injurious to Vegetation," has established his reputation, not merely as a *scientific* entomologist, but one who labors to render science directly applicable to the daily requisitions of the cultivator of the soil, are most acceptable at the present moment. ED.]

ON THE CULTURE OF TALL OR CLIMBING ROSES.

BY MR. A. FORSYTH, ALTON TOWERS, ENGLAND.*

IF we wish to convey correct ideas of plants, we must adhere to botanical descriptions, and not to terms used in common conversation; for we find the term *tree* used in speaking of ligneous, herbaceous, and even annual plants. We have tree-pæony, tree-violet, and even tree-mignonette: no wonder, then, that we should have tree-roses.

The standard rose is generally termed a tree-rose; and, before we go further with the subject, it may be necessary to state, that "when the branches are perennial, and supported upon a trunk, a tree is said to be formed."†

If I recollect rightly, Loudon has somewhere set the boundary mark for a tree at from "four to six inches diameter, with a single bole or stem." Now there are rose-plants here with stems 6 inches in diameter; still these dimensions do not constitute them rose-trees; for the common laurel will attain a diameter of six feet, and form an enormous head, yet the normal form of the laurel, as well as that of the rose, is decidedly a shrub; and accordingly in botanical works we find them constantly so named. The largest rose-plant to be met with, scarcely amounts to the character of a small tree, (*arbusculus*) by any reasonable stretch of courtesy. But I am reminded to get rose-plants with the appearance at least, and with the size of head of a tree, (arbor) aye, even of such a tree as the princely cedar, so graphically portrayed by Ezekiel in his vision of the fall of the kings of Egypt and Assyria; and if the fall of such a tree be terrible to behold, surely its standing clad with roses, would be majestic and goodly fair to see.

* From the Journal of the London Hort. Society.

† Lindley's Introd uction to Botany.

The rose is unquestionably the most popular flower known, and its geographical range embraces, according to Loudon, (Arb. Brit.) Europe, and the temperate regions of Asia, Africa, and America: in all these it is said to be found wild, but not in Australia. Now I have it from an eye-witness,* that in the wilds of Australia the rose is seen in abundance, in the form of sweetbriar; it seems, therefore, to be as universally distributed as it is universally admired. From the language of holy writ it is clear that the rose was held in high esteem in the days of King Solomon; for if we compare the sentence, "I am the rose of Sharon," as rendered by King James' translators, with the same sentence in the Douay version of the Bible, "I am the flower of the field," and add the sentence, "I was exalted as a rose-plant in Jericho," (Eccles. xxiv. 18) we may conclude that in the valley of the Jordan there were fields of roses, and that the rose was there held in such favour as bordered on veneration, and this 3000 years before our day. In Geramb's Pilgrimage to Palestine in 1831, we find the following passages:—"The plain of Sharon which I traversed, so extolled in Scripture, was enamelled with flowers,"—"Rama, nearly on the borders of the plain of Sharon, is in a delightful situation,"—"The weather was brilliant, and reminded me of the beautiful spring days of Italy;" and farther on he adds, that in climbing the hills of Judea, "where there is not a trace of a road or of a plant save a few olive trees and some oaks, and these look as if scathed with the lightning; the eye, saddened with the sterility of the soil, needed some relief, and he turned from this scene of rocks piled one upon another, to look back at that beautiful plain of Sharon and the sea which bounds it." We may now see the force of the phrase in the inspired song, "I am the rose of Sharon;" for if Sharon be thus lovely in ruin and under oppression, and after earthquakes, plagues, and plunderings, surely its rosy morn and its palmy day must have been glorious.

The Romans are said to have rioted among roses, and throughout Christendom the rose has constantly been cultivated around the dwellings of both rich and poor.

* Bishop Wilson, of Hobart Town.

We read glowing descriptions of "*Syria, land of roses*," yet we find, from the clearest evidence, that England boasts many a splendid rose, unknown and unsurpassed in Syria. The materials are in our own hands, and therefore there is no reasonable cause to hinder us from realizing fields of roses, aye, and trees of roses large as our wishes. I need not say that this cannot be accomplished if we are to confine our ideas of a rose-tree to the tuft of tiny rose-twigs on a dog-rose stem tied to an iron poker or a square stick, whose outline (especially in winter) resembles that of a besom, with the handle in the earth and the brush-part in the air.

Let no one imagine that I wish to speak slightingly of the ordinary culture of roses. I only wish to push the subject far beyond its present limits, to carry roses into fresh pastures, and unite them to *living* stakes or props, as "vines are wedded to their elms" in Portugal and Spain.

The ivy, standing in its own strength, is but a sorry shrub, and when unassisted with props, or unattended with culture, it only creeps and clambers, a lowly, uninteresting evergreen, forming a monotonous mass of dense and dingy foliage, draining the earth of moisture and nourishment, and thereby starving outright every vegetable in its vicinity which it had failed to choke with its fleece of leaves; yet we find the ivy, as at Wrotham Park, for example, standing on the lawn supported by its own stem, and forming a fine globular head. There are ivy trees here 30 feet high, with a conical outline like that of the Arbor vitæ. These examples may show how the outlines and habits of plants may be altered by subjecting them to a particular mode of treatment in the training and propping. The honeysuckle, unassisted, is little to be admired in its squat and shapeless mass; yet every one will bear witness to its charms when seen in bloom entwined on tree or bower. A mountain ash in the grounds here has held up to admiration a plant of the honeysuckle high and wide for many years. A tall spruce fir propped for a long time another honeysuckle close to the above-mentioned specimen. I mention this evergreen tree with its honeysuckle to prove that

climbers or twiners will live and flower among the spray of evergreen trees; and further, to show that this is not a new combination, I need only quote the couplet,

> "Not a pine in my grove is there seen
> But a woodbine entwines it around."

Cottam and Hallen's cast-iron rose-stake may be regarded as perhaps the most ornamental and economical *dead* prop in use. This elegant stake I quote here, that I may compare its cost with the price of those I am about to introduce, and likewise that we may continue its services to prop the tiny growing roses worked upon other rose-stems, in order to bring them near the eye, so that ladies may closely examine the rose without stooping, and without being tempted to pluck it; for of all the casualties to be guarded against, that of not leaving the rose upon its stem until the flower has faded is the most important. The price of this stake, six feet long, and strong in proportion to its length, is said to be 1s. 6½d. (Encyclopædia of Gardening.) The square heavy heart-of-oak stake, if sufficiently strong to be durable, and well painted, will cost little less than the iron one above quoted. The drawbacks to dead props are, first, the necessity for continual painting, then rust in the iron under ground, and rot in wood at the surface of the ground, the too slender form of the iron stake, and the unnatural square form of the wooden one, so much at variance with the nicely-balanced and symmetrical proportions of live timber, whose wooden trunks are never square like our wooden rose-prop, neither are they so *fine drawn* as the fashionable form of a standard rose with an iron prop.

The mountain-ash, when growing as a tree, is admirably suited to prop a climbing rose. Its foliage is pinnate, and not to be easily distinguished from the foliage of the rose; the colour of its trunk and that of the stem of the rose are the same ashy grey; in size, it is decidedly a small-growing tree; in habit it is stiff and formal, with spray full of antlers or little hooks, all tending upwards, just as if Dame Nature had made a tree of pegs to hang her rosy mantle on. Now the price of these living props, three feet high, is THREE FOR A PENNY, and six feet high, only a penny each. Good plants of mountain-ash were delivered here, carriage paid, this season, at 25*s.* per 1000, three feet high, and larger sizes at 1d. each, as I have stated. Now, lest any one should imagine that I think of filling up a flower-garden with mountain-ash trees, I must beg leave to state, that where there is room for the rose-trees that I propose, there will be no lack of space for the stakes or props, for they will be within the rose-trees. These rose-trees were never intended for small gardens, and scarcely for large ones: they are the gigantic materials for fields of flowers high and wide, of long and deep avenues, the foreground figures fair and fragrant in the glades and dells of park scenery, where rides and drives invite. The bramble is another brother of the rose family, and this, as well as the mountain-ash, rambles at large by ravine and crag, growing freely in any reasonable situation, and in spots where neither grazing nor tillage can be carried on. Surely, then, we may reasonably hope to establish a climbing rose in a locality where two brothers of the same family already flourish.

The rose and its prop must be planted young in well-prepared earth; for, be it remembered, they will just grow and flower in proportion as they are fed, and therefore such a spread of foliage as is here expected requires something like a vine-border to give the necessary supplies of food, &c.

I do not write to please those parties who know so little of rose culture as to imagine that roses will not climb very high trees and flower freely. The Rosa arvensis climbs to the top of an arbor vitæ in the grounds here 20 or 30 feet, and its long and gracefully bending shoots may be seen dangling from the branches of high trees in the woods here and elsewhere. Loudon mentions (Arb. Brit., p. 790) Eastwell Park, Pains Hill, Claremont, Pepperharrow, Spring Grove, and Fonthill, where similar specimens may be seen of Rosa arvensis, and particularly the Ayrshire and the evergreen roses, producing a fine effect, flowering, and even forming festoons among high trees. I need scarcely add, that in length and strength of vine many of the cultivated roses equal and even surpass the wild rose. I have seen climbing roses against a wall here and at

other places make shoots 20 feet long in a couple of seasons, and flower profusely; therefore, if the Rosa arvensis and its varieties climb trees of their own accord, surely art might train the twigs of other climbing roses in a track where nature unassisted prompts them to run. There is no plant of easier culture than the climbing rose; for all roses grow freely from cuttings, and thrive well in the common corn-land of the country, and even in places and soils where corn would scarcely be produced. They never fail running and flowering every year; and this running propensity, or, in other words, this truly desirable quick habit of growth, has hitherto caused this section of the rose family to be excluded from collections, or, if not excluded, to be unmercifully cut in, in order to keep them in bounds, which cutting, owing to the peculiar habits of this section of roses, amounts to nothing less than cutting off their heads; for if they are cut at all, the head or flowering part, being at the tip, is sure to be sacrificed, whether the cutting be only an inch or a pole in length. The climbing roses should either have a building to climb on, as a ruin, a bower, a wall, a trellis, &c., or, failing these, they may readily and cheaply be accommodated with a tree to climb for the small outlay of one penny. This arrangement is not confined to the culture of climbing roses only, but should extend to the culture of climbers of all kinds; for at the present time climbers cannot be grown in gardens, from sheer want of anything to climb upon. The grape-vine family, nearly all hardy, but seldom grown, produces the most beautiful foliage imaginable as a climber; but, alas! for lack of the prop, we lose the service of the vine. In an economical point of view the vine is worthy of a place with a tall yew hedge to back it, and, thus situated, something more than leaves would repay the planter. Any one who has eaten grapes cooked, even when not fully ripe, will allow that they are superior to any other tart-fruit, and, as they would come in late in autumn, could not fail to find a welcome at table when our native fruits were ripe or dead. The white bryony formed an object of the greatest beauty, growing up the face of a tall clipped yew hedge at Caenwood, in the kitchen-garden. This plant attached itself by its tendrils to the hedge; and, as it belongs to Cucurbits, it gives an admirable lesson to cucumber growers, for it formed a perfect fan, with rays nine feet long, *without the aid of man.* The cucumber is a plant adapted by nature for a similar situation; for its beautiful tendrils tell that they were never made to crawl, but to climb. But I need not go farther than to the pea for an example of the value of living props: hundreds of persons would grow peas if they had sticks to prop them with. I saw a neighbor with a row of peas well sticked with a couple of rows of living beans, which by a special blunder had been sowed after the peas were covered with the soil.

The cultivation of climbers is a field too great to be entered upon here, and yet too important to be passed over in silence. I have therefore thrown out these hints in passing, and leave it to the lovers and admirers of this class of plants to carry it out, resting assured that the scarlet trumpets of that splendid climber, the trumpet-flowering honeysuckle, alone will proclaim by their few and feeble specimens the truth of what I am endeavouring to show, namely, that for want of a prop we lose the services of the most beautiful plants that could adorn a garden, ay, and the services too of valuable esculents. But to return to the rose. The umbrella form of trellis is well suited to show to advantage certain kinds of roses. Now the dwarf or weeping elm, engrafted on the common elm, forms an elegant head of this form; and, as these artificial drooping-headed trees are monsters, and grow slowly, they may be kept in dressed ground in small compass for many years. The one which I have before me has been four years planted; and one or two others, about ten years planted, have yet but very small heads. I may here mention that the young shoots of the elm resemble an immense pinnate leaf, and thus the leaf of the rose harmonises better with the foliage of the elm than I was led to expect before I made the comparison with the rose and elm twigs united.

The weeping ash makes an admirable trellis for a climbing, or rather a trailing rose, and having pinnate leaves, the harmony of the foliage with that of the rose is complete. Nothing but a figure drawn ac-

curately to a scale can give an idea of the excellent habit of this tree, standing as it does on a clean single stem, and forming a globular head with a fine bold outline, which may be varied by pruning to form an umbrella or semi-globular head, or may be allowed to feather down to the ground, and form an egg-shaped tent.

Every weeping tree gives the idea of being depressed, and its very name "weeping" implies a lack of comfort; therefore it should not be alone, but have a partner, whose rosy face should look upward, and at the same time look light and cheerful. To intertwine a weeping ash with roses would seem to mingle joy with its weeping, and make a striking contrast, since it could not fail to excite surprise to see a tree that usually hangs its head, and never shows a flower, come forth at last arrayed in such a bloom.

Various devices have been resorted to to hide the unsightly shank or stem of the standard rose, with more or less effect. I have sowed sweet peas around some, and planted other climbing plants round others, and have succeeded very well sometimes with such twiners as the ipomœas, &c., forming a cone of elegant flowers, and making the rose-stake serviceable to support a succession of flowers after the roses had faded. Still these creatures of a day, the ipomœas, &c., deserted me in my utmost need, for the least foul weather made them useless; and if they grew freely, they would not stop at any reasonable length, and, being so delicate when young, the smallest accident was sufficient to make a blank. The want of evergreens in a flower-garden in winter has long been felt, and, in short, to obtain a succession of beautiful living objects is the aim of every gardener in planting a garden.

Now in this garden there exists, whether by design or accident I know not, a thicket of tall yew-trees, and in front of these some very tall rhododendrons, and drawn up between the yews and the rhododendrons there stands a fine rose-bush, and, after the rhododendrons have flowered and faded, the rose blooms in the face of this "dismal grove of sable yew." And it is to this contrast of bright rose-colour against dark green that I would invite notice: it sets off the rose to the greatest advantage, and always attracts attention, it being altogether unlooked for from such a sombre subject as the yew to wear a blush or other rosy hue upon its sullen face. Now, although the common yew-tree be well adapted to support a climbing or other rose, from its patiently enduring to be clipped or pruned into any reasonable or even unreasonable form, I would prefer the Irish yew, and make the head of the rose stand high enough to bloom above the yew. It is the ordinary system that nature follows to elevate the panicle or cluster of flowers of a plant above the foliage. By this combination we get rid of the unsightly rose-stake, by effectually hiding it in the thick foliage of the yew, and, instead of a leafless rose, with a long grey switch of a stem tied to round iron or square tree all the winter, we have an elegant evergreen tree, admirably suited to the stiff formal lines of geometrical flower-gardens; and surely a crown of roses, if properly worn, would set off to advantage the staid and sober virtues of the upright yew, neither would it derogate from its dignity thus to become handmaid to the queen of flowers.

The Robinia pseud-acacia, or common yellow locust-tree, having beautiful pinnate foliage, will make an admirable rose-tree; and the apple and pear-trees, beautiful and rosy in themselves both in flower and in fruit, in certain situations might be employed with excellent effect to prop roses.

Cultivation of Cranberries.—The Ohio Cultivator says that most of the experiments tried in that state, in the cultivation of cranberries, have not been attended with much success. Several cultivators have tried them on wet black muck, similar to their natural soil; but the plants grow but little, and the grass and weeds soon get the mastery. The Yarmouth Register (Massachusetts) thinks that *damp, barren sands* is the only soil on which cranberries can be grown successfully.

THE MYSTERIES OF THE POULTRY YARD.*

[If among "rural arts," that somewhat difficult one of raising turkeys may be reckoned, then have we been unmindful of the interests of a certain class of our readers. To make amends. we serve them up to-day a piquant and complete article, by one who looks at the *basse-cour* with the eye of a philosopher.—Ed.]

If we call to mind the many and valuable acquisitions from both the animal and vegetable kingdom which have been made subservient to the use of man within comparatively a very recent period, it is not too much to believe that others, of nearly or quite equal value, still remain to reward the labor and pains of a persevering search. There is the whole of central Africa, central Australia, great part of China and northern India (which have already afforded us so much) and innumerable half-explored or unexplored islands, all waiting to be ransacked for our benefit. And without depending upon those distant regions, we know not yet what we may find at home; seeing that the delicious Seakale—an esculent whose merits are yet unknown to many a family of competent means living in retirement—has only within the last few years sprung up under our very feet; and the Capercali, by an easy importation, has been rescued from extinction in Great Britain.

Amongst the living tributaries to the luxury of man, the turkey is an example of the results yet to be expected from the exploring spirit of our day. It is the most recent, and, except the hen and the goose, the most valuable of our domesticated birds. We may, indeed, call it quite a new introduction; for what, after all, is a period of 300 years, compared with the time during which man has had dominion over the earth and its brute inhabitants? The obscurity which hangs over the transmission of the turkey from America, and which there is little chance of clearing away, except by industrious ferreting amongst old family records and memorandum books, shows that those who brought it to the old world had no idea of the value of what they were importing; but probably regarded it like any other remarkable production of nature—a macaw or a tortoise. The young would be distributed among friends with the same feeling that golden pheasants and such like are with us; these again would thrive and increase, and the nation would suddenly find itself in the possession of a race not of pleasing pets, but of valuable, prolific, and hardy stock of poultry. Such I take to be the history of the turkey in England; and the Zoological and Ornithological Societies may hereafter find that some creature that was disregarded, or undervalued, or even yet unobtained, will prove unexpectedly domestic and profitable (it may be the Cereopsis, some of the Indian Polyplectrons, or the elegant Honduras turkey;) to further which great object of their association they cannot do better than communicate spare specimens, on the most liberal and encouraging terms, to such persons as they believe competent fairly to test their value.

The varieties of the domesticated turkey are not very distinct. The most so is the Norfolk; the others may all be swept into what is called the Cambridge breed (thus including the bustard and Dutch copper-colored breeds,) which, however, is as much cultivated in Norfolk as the old local stock, and birds of which kind often pass for true Norfolks, because they have been procured from that county. The real Norfolk turkey is more hardy, but less ornamental than the others, and of smaller size. It is entirely black, except the red skin about the head, and a brownish tip to the feathers of the tail and some of those of the back. This gives the bird a rusty appearance, like an old piece of well-worn cotton velvet. The Cambridge sort, when black. have a beautifully shining blueish tinge, like a well-polished boot. The chicks of the Norfolks are black, with occasionally white patches about the head; those of the Cambridge variety are mottled all over with brownish grey, and are of taller and slenderer proportions. The white individuals of either variety are accidental; this color is scarcely permanent in their offspring; they are tender, not pleasing to every eye, and altogether not to be recommended. The plumage of the Cambridge breed varies very much; sometimes it is entirely made up of shades of reddish brown and grey, when it is called the bustard breed; sometimes of grey, black, and white, but frequently it approaches very nearly to what we see figured as the wild bird. In the "Naturalist's Library," the hen of the wild turkey, copied from Audubon, is represented with a hairy tuft like that of the cock hanging from her breast. I have not seen this in the tame variety. A hen in my possession that will be four years old next spring (1848) has no symptom of its appearance. The reason why the turkeys seen in our poultry yards do not vie in splendour of plumage with their untamed brethren is that we do not let them live long enough. A creature that does not attain its full growth till its fifth or sixth year, we kill at latest in the second, to the evident deterioration of our stock. But let three or four well selected Cambridge turkeys be retained to their really adult state, and well fed meanwhile, and they will quite recompense their keeper by their beauty in full plumage, by their glancing hues of gilded green and purple, their lovely shades of brown, bronze and black, and the pearly lustre that radiates from their polished feathers. In default of wild specimens, birds like these are sought to complete collections of stuffed birds.

The demand for such large birds among the fowl-dealers, and the temptation to fat them before they arrive at this stage, are so great, that few

*From the London Agricultural Gazette.

farmer's wives can resist sending their 18 or 20 lb. "stag" * to market, while a young cock of the year, they think, will answer every purpose next spring as well. Some even deem it an extravagance to keep a turkey-cock at all, if they have not more than two hens, which they would send on a visit of a day or two to a neighbor who has a male bird. The time when the hens require this change of air in spring may be known by their lying down on the ground, as if they were unwell, doing so immediately again, if taken up and made to walk on, which apparent languor is accompanied by a lack-a-daisical love-sick expression of countenance. Last Christmas we ate or gave away all our turkeys (including a magnificent stag, whose image haunts us still) except one hen. The above mentioned plan was necessarily adopted, and the result was from 11 eggs, 8 chicks so strong as almost to rear themselves.

When the hen has once selected a spot for her nest, she will continue to lay there till the time of incubation, so that the eggs may be brought home from day to day, there being no need of a nest egg, as with the common fowl. She will lay from 15 to 20 eggs, more or less. Her determination to sit will be known by her constantly remaining on the nest, though empty; and as it is seldom in a position sufficiently secure against the weather or pilferers, a nest should be prepared for her by placing some straw, with her eggs, on the floor of a convenient out-house. She should then be brought home and gently and kindly placed upon it. It is a most pleasing sight to witness the satisfaction with which the bird takes to her long-lost eggs, turning them about, placing them with her bill in the most suitable positions, packing the straw tightly around and under them, and finally sinking upon them with the quiet joy of anticipated maternity.

Thirteen eggs are enough to give her; a large hen might cover more; but a few strong, well-hatched chicks are better than a large brood of weaklings, that have been delayed in the shell, perhaps 12 hours over the time, from insufficient warmth. At the end of a week it is usual to add two or three fowl's eggs, "to teach the young turkeys to peck." The plan is not a bad one; the activity of the chickens does stir up some emulation in their larger brethren; the eggs take but little room in the nest; and at the end of the summer you have two or three very fine fowls, all the plumper for the extra diet they have shared with the little turkeys.

Some ladies believe it necessary to turn the eggs once a day; but the hen does that herself many times a day. If the eggs are marked and you notice their position when she leaves the nest, you will never find them arranged in the same order. A person who obtained 99 chicks from 100 eggs, took the great trouble to turn every egg every day with her own hand, during the whole time of incubation. The result *appears* favorable; but, in fact, only amounts to this, that such officiousness did no harm with such a good, patient, quiet creature as the sitting turkey is, but it would probably have worried and annoyed any other bird into addling her whole clutch. We will at once reject, as utterly absurd and unnatural, all directions to immerse or "try" the eggs in a pail of water, hot or cold.

In four weeks the little birds will be hatched; and then, how are they to be reared? Some books tell you to plunge them in cold water, to strengthen them: those that survive will certainly be hardy birds.* Others say, "make them swallow a whole pepper-corn;" which is as if we were to cram a London Pippin down the throat of a new-born babe. Others, again, say, "give them a little ale, beer or wine." We know unhappily that some mothers are wicked enough to give their infants gin, and we know the consequences.

Give them nothing; do nothing to them; let them be in the nest under the shelter of their mother's wings, at least eight or ten hours; if hatched in the afternoon till the following morning. Then place her on the grass, in the sun, under a roomy coop. If the weather be fine she may be stationed where you choose by a long piece of flannel list tied round one leg, and fastened to a stump or a stone. But the boarded coop saves her ever-watchful anxiety from the dread of enemies above and behind—the carrion-crow, the hawk, the rat, the weasel; and also protects herself—she will protect her young—from the sudden showers of summer. Offer at first a few crumbs of bread; the little ones, for some hours, will be in no hurry to eat; but when they do begin, supply them constantly and abundantly with chopped egg, shreds of meat and fat, curd, boiled rice mixed with cress, lettuce, and the green of onions. Melted mutton suet poured over barley-meal, and cut up when cold; also bullock's liver boiled and minced, are excellent things. The quantity consumed costs nothing; the attention to supply it is everything.

The young of the turkey afford a remarkable instance of hereditary and transmitted habits. From having been tended for many generations with so much care, they appear naturally to expect it almost as soon as they are released from the shell. We are told that young pointers, the descendants of well-educated dogs, will point at the scent of game without any previous training; and so turkey chicks seem to wait for the attention of man before they can have any experience of the value or nature of those attentions. Food which they would refuse from a platter, they will peck greedily from

* In Norfolk, turkey-cocks are called stags from their second year upwards.

* Sir J. S. Sebright exposes the folly of endeavoring to make young creatures robust by undue exposure to cold and hardship, an experiment which some men and women are cruel enough to try upon their own offspring. Air and exercise increase the strength of any growing animal, but cold and hunger only dwarf and weaken. We see robust children in extremely poor families, not because they are poor, but because if they were not robust, they would not be alive at all. Sir John, in his "Treatise on improving the Breeds of Domestic Animals," pp. 15, 16, says, "In cold and barren countries no animals can live to the age of maturity but those that have strong constitutions; the weak and the unhealthy do not live to propagate their infirmities, as is too often the case with our domestic animals. To this I attribute the peculiar hardiness of the horses, cattle, and sheep, bred in mountainous countries, more than to their having been inured to the severity of the climate; for our domestic animals do not become more hardy by being exposed, when young to cold and hunger; animals so treated will not, when arrived at the age of maturity, endure so much hardship as those who have been better kept in their infant state."

the palm of a hand; a crumb which would be disdained if seen accidentally on the ground, will be relished from the tip of a finger. The proverb that "the master's eye fattens the horse," is applicable to them not in a metaphorical, but in a literal sense; for they certainly take their food with a better appetite if their keeper stays to distribute it, and *see* them eat it, than if he merely set it down and left them to help themselves.

I believe this to be the case with more domesticated animals than we are aware of, and appears natural enough if we remember how much more we enjoy a meal in the society of those we love and respect, than if we partook of it in indifferent or disagreeable company.

However, there can be no doubt that young turkeys pampered and spoiled for about three hundred generations, have at length acquired an innate disposition to rely on the care of man. Sir Humphrey Davy, in his "Salmonia," believes that a like hereditary instinct is engendered even in fishes, believing that the trout, &c., in unfrequented rivers, are more unsuspicious of artificial flies than those in the streams of Great Britain "This," he says, "may be fancy, yet I have referred it to a kind of hereditary disposition, which has been formed and transmitted from their progenitors."

At any rate, it is neither a dream nor a guess with young turkey-chicks, to which we will now return. A sitting of wild turkey's eggs does not often fall into the hands of an American gamekeeper, if such a person there be, but I am afraid he would find his brood more shy and troublesome than the shyest of partridges or pheasants.

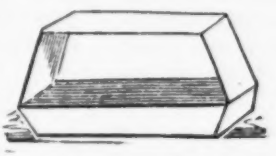
The turkeys, then, are hatched, and we are rearing them. Abundant food for the mother and her young, constant attention to their wants, are the grand desiderata. An open glade in a grove, with long grass, and shrubs here and there, is the best possible location. A great deal is said about clear and fresh water for fowls; but I have observed that if left to their own choice, they will be as content and healthy with the rinsings of the scullery, or the muddiest pool, as with the purest spring. The long grass will afford them cover from the birds of prey; the hen will herself drive off four-footed enemies with great courage. I have been amused with the fury with which a mother turkey has pursued a squirrel, till it took refuge in the branches overhead; what instinctive fear urged her I know not. Insects, too, will abound in such a situation. When the little creatures are three or four days old, they will watch each fly that alights on a neighboring flower, fix it with mesmeric intensity, and by slow approach often succeed in their final rush. But in the best position you can station them, forget them not for one hour in the day. If you do, the little turkeys will for a time loudly yelp "Ricordati di me," "O then remember me," in notes less melodious than those of a *prima donna*, and then they will be sulky and silent. When you at length bring their delayed meal, some will eat, some will not. Those that will not, can only be saved by a method at all other times unjustifiable; namely, by cramming; but it must be done most gently. The soft crumb of bread rolled into miniature sausages, should be introduced till their crops are full. For drink, many would give wine, I advise milk. The bird wants material, not stimulant. It has been actually wire-drawn. It has grown all the hours you have neglected it, without any thing to grow from. Like a young plant in the fine spring season, it will and must grow; but it has no roots in the fertile earth to obtain incessant nourishment. The roots which supply its growth are in its stomach, which it is your office to replenish. Prevention is better than cure. Such a case ought never to occur in a well-cared for poultry-yard.

When two hens hatch at or near the same time, the two broods may be given to one mother, and the other hen turned out to range. If kept from the sound and sight of her little ones for a few days, she will not pine like the common hen, but will shortly recommence laying, and so produce a later hatch that will be very acceptable the following February and March. Sometimes two hens will choose to sit and lay in the same nest, like the wild birds mentioned by Audubon; but it is better not permitted. They will not quarrel, but alternately steal each other's eggs, and run the chance of addling all. A frequent practice is to hatch spare turkeys' eggs under common hens. This answers well in fine dry summers, but not in wet cold seasons. The turkey-poults require to be brooded much longer than chickens; the poor hen will be seen vainly endeavouring to shelter and warm young turkeys nearly as big as herself, till she gives up the task in despair, and leaves them to shift for themselves. It is better to transfer the chicks as soon as hatched to a turkey, and give the hen some fowl's eggs to go on with another three weeks. The improved and less rambling disposition of turkeys that have been reared by a hen is, unfortunately, all imagination, notwithstanding what Cobbett has so beautifully written on the subject. The instinct of the turkey is no more altered by this mode of education than the migrations of the cuckoo are checked by its being brought up by hedge-sparrow. The only way to keep turkeys from rambling, is to feed them well and regularly at home.

The time when the turkey hen may be allowed full liberty with her brood, depends so much on season, situation, &c., that it must be left to the exercise of the keeper's judgment. A safe rule may be fixed at the season called "shooting the red," a "disease," as some compilers are pleased to term it; being about as much a disease as when the eldest son of the turkey's master and mistress shoots his beard. When young turkeys approach the size of a partridge, or before, the granular fleshy excrescences on the head and neck begin to appear; soon after, the whole plumage, particularly the tail feathers, start into rapid growth, and the "disease" is only to be counteracted by liberal nourishment. If let loose at this time they will obtain much by foraging, and still be thankful for all you choose to give them. Caraway seeds, as a tonic, are a great secret with some professional people. They will doubtless be beneficial, if added to plenty of barley, boiled potatoes, chopped vegetables, and refuse meat. And now is the time that turkeys begin to be troublesome and voracious.

What can you expect else from a creature that is to grow from the size of a lark to 12 or 14 lbs. in eight or nine months? "Corn sacks, coffers for oats, barn-swallowers, ill neighbors to Peasen," are epithets deservedly earned. They will jump into the potato ground, scratch the ridges on one side, eat every grub wireworm, or beetle that they find, and every half-grown potato. From thence they will proceed to the Swedes; before the bulbs are formed they will strip the green from the leaves, thereby checking the subsequent growth of the root. At a subsequent period they will do the same to the white turnips, and here and there take a piece out of the turnip itself. They are seldom large enough before harvest to make so much havoc among the standing corn, as cocks and hens and guinea-fowl, or they have not yet acquired the taste for it; but when the young wheat comes up in October and November, they will exhibit their graminivorous propensities, to the great disadvantage of the farmer. The farmer's wife sees them not, says nothing, but at Christmas boasts of the large amount of her turkey money. One great merit in old birds (besides their ornamental value, which is our special recommendation) is that in situations where nuts, acorns, and mast are to be had, they will lead off their brood to these, and comparatively (that is all) abstain from ravaging other crops. It is, therefore, not fair for a small occupier to be overstocked with turkeys (as is too often the case, and with other things also,) and then to let them loose, like so many harpies, to devastate and plunder their neighbour's fields.

Soon after Michaelmas, it will be time to think of fatting a portion of them. Some families require turkeys very early in the season; but they are like every other immature production, inferior in quality. To eat turkey poults is a wasteful piece of luxury; those who order them are occasionally deceived by a small hen of the previous year. In the Roman markets hen turkeys sell for a bajocco (halfpenny) a pound more than the cock, and there are turkey butchers, of whom you may buy the half or a quarter of a bird. A hen will be five or six weeks in fatting, a large stag two months or longer, to bring him to his full weight. The best diet is barley-meal mixed with water, given in troughs (see fig.,) that have a flat board over them, to keep dirt from falling in. A turnip with the leaves attached, or a hearted cabbage, may now and then be thrown down to amuse them. Some use plain oats, but barley-meal is preferable, acting more quickly. Cramming is unnecessary, though it may hasten the process. When they have arrived at the desired degree of fatness, those which are not wanted for immediate use must have no more food given them than is just sufficient to keep them in that state, otherwise the flesh will become red and inflamed, and of course less palatable and wholesome. The turkey differs from the rest of our poultry in being fit for the table after its youth is past. Very few of the large turkeys that are brought to market are less than 18 months old; many are double that age. Nor are they the worse, provided the lady of the house be informed of the circumstance, and so enabled to leave a due interim between the killing and the cooking.



The hen turkey, contrary to the statements of some writers, does now and then erect her tail and strut like the male, and that, too, without any diminution of her feminine virtues. The manners of the cock are not prepossessing; he is vain, ungallant, careless of his young, a bully, though not always a coward, the most selfish creature in the poultry-yard, except the musk-drake, sometimes also apt to be seized with odd fancies that render him useless. Their supposed antipathy to the colour of red or scarlet, I believe to be an unfounded prejudice. They display less individual attachment to man than most other poultry, though they have equally, or more, thrown themselves on the protection of the race of mankind. They are called stupid, but mark the intelligence and amiability displayed by every look and action of a hen with her young. And yet little real alteration of her former manner is apparent. The strut that seemed foolishly pompous now strikes us as justly proud and cautious; the eye in which only affectation was apparent now glances with anxiety and beams with tenderness. The discordant voice has now an object in its call, and may be heard almost to whisper in subdued notes of gentle affection. Thus even, in the poor bird that we rear, admire and kill, a higher charm and elevation is added by the exercise of those holy affections which the beneficent Creator of all has given us for our comfort.—D.

REVIEW.

A Discourse, *delivered at the Plymouth Church, Brooklyn, N. Y.; by* Henry Ward Beecher. New-York: published by Cady & Burgess, 60 John street.

Rarely have we perused a pamphlet with greater intellectual or moral gratification, than this—a Thanksgiving Discourse—by that able and eloquent man, Mr. Beecher. It is a discourse which every patriot should read, for it will exhibit to him the true greatness of his country: which every farmer should read, for it will cause him to thank Heaven for the lot in which his life is cast; and which every American should read, that he may learn the value of the

national blessings that surround, and the danger of the national evils that threaten him.

Mr. BEECHER's genius, appears to us to be in the clearness and the breadth of his vision, as a man and a teacher. Looking at humanity and the age, his glance is neither disturbed by the cloud of ancient dogmas that rises from the past and overshadows our horizon, nor the bright and captivating gleams of new light that irradiate and beckon us forward to the future. He is not only a profound thinker, and a most earnest and zealous expounder of truth, but *a man of his time*—who utters the thoughts, and interprets the language, of the great struggling heart of the nineteenth century; and especially of the Anglo-American race, boldly and significantly;—and this, too, while so many are fondly endeavouring to maintain an appearance of life, in ideas whose vitality has long since departed, or to galvanize into a premature existence new ones, for which neither our people or the time is ready.

In the discourse before us, Mr. BEECHER discusses the blessings which flow from our condition, our institutions, and our voluntary exertions as a people. It is neither our purpose, nor the province of this Journal, to pursue him in all the different divisions of his subject, though we heartily commend them to perusal. But one of these topics, *the value of our agricultural position*, is so admirably treated, and so pertinent to our readers, that we are confident they will all thank us for reprinting it in these pages:

We do not enough reflect how much of our prosperity arises from the possession of such and so much SOIL.

It is difficult for the imagination to conceive of its extent, its variety, and its capacity. Books may detail its bounds, and travellers recite its wonders; but it is not until the eye has beheld, and the feet, through many a parallel, have traversed woodland and prairie, hill-country and river-vale, stretching for thousands of miles, that one begins to feel the magnitude of our territory. So far does it reach toward the pole that summer smiles faintly and but briefly upon its northern limit; while its southern limit, pushing toward the tropics, is seldom cooled by winter frosts. So far is the east removed from the west, that they have neither morning nor evening together; and their harbors look out upon different oceans, upon opposite sides of the globe.*

A pure religion and liberal civil institutions, would have done much for us; but it has been the accident of an abundant soil which has given them so fair a field. Men have found room to move as religious liberty inspired them, without lifting or fighting a thousand superimposed customs. Religion and liberal influences, in Europe, have been like winds upon ships embayed or threading narrow channels; which, though they urged them forward, drove them at every furlong toward shoals or rocks of old customs and laws. But we have had the broad ocean. Let us examine more in detail the influence of ample soil upon national character and prosperity.

There is no pursuit which more directly

* If a million of people should annually pour into the single State of Indiana, for fifteen years, the soil could sustain them. I shall be thought extravagant by those only who have not reflected, when I say, that, if not a kernel of grain were raised in any other State in the Union, Indiana, if put to its full capacity, could easily supply every one. At twenty bushels to the acre, Indiana might yield, if wholly tilled, an annual crop of 500,000,000 bushels of wheat. If Illinois were to yield only Indian corn, at the rate of fifty bushels per acre, her annual crop of Maize might become 1,920,000,000 bushels! These two States alone *might* annually supply twenty millions of people, respectively, with twenty-five bushels of wheat per head, and nearly one hundred bushels of corn. It is manifest, that this supply is so greatly above the want, that it might be reduced in favor of all other products, needed for the sustenance and comfort of men and beasts. The absolute capacity of an acre of soil has never yet been tested. The nearest approximation has been made under the allotment system of Great Britain, the soil being cultivated entirely by the spade. From some estimates founded upon the results of that system, it is not wide of the truth to say that Indiana, upon her 23,000,000 acres, *could* sustain a population of 90,000,000! That it would be desirable to crowd the soil so near to its extreme capacity is far from being proved, except as the less of two evils, as amidst the redundant population of Europe.

conduces to health, industry, sobriety, temperance, personal independence, and political stability, than husbandry. Since the world began, the soil has been the mother and nurse of sound and healthy-hearted men; and cities are only saved from physical degeneracy, by large annual drafts from the rural population.

The effects of sound health and of particular occupations upon morals, is great. Pursuits which thrive by competition, sharpen men's wits, and give force to enterprise; but too often, at the expense of simplicity, truthfulness, and sensitiveness to honor and integrity.

More than anywhere else, men are trained on the soil to industry, self-reliance, and enterprise, without paying for prosperity by their morals. While the farm underlays all commercial and manufacturing interests, and by its products maintains all other forms of industry, yet, after all, its best crop is the men it yields.

In other pursuits men may be men. Other avocations enlarge the understanding, task the ingenuity, grind off the roughness of nature, and give polish and beauty. But there is not another department of society which enables *so many* men to live as *independent principals*. In almost all other pursuits men are, as employers and employed, woven into the fabric, so that no thread can be separated without violence to the whole. The mechanic, honorable and useful, is affiliated to others for livelihood, and to some extent must fluctuate with them. The clothier cannot eat his fabrics, nor the carpenter wear his structures, nor the mason sleep upon his brick and mortar, nor the smith feed hungry mouths from his anvil. These are all grouped together in interdependence. They are not the separate trees of the forest, each growing by its own root; but they are those trees felled, squared, morticed and fitted together.

The husbandman alone can find in his province the elements of living—food, raiment, shelter, and the raw material for almost every physical want. Other processes augment the value of these rude elements. But if worse comes to worst, the farmer can best live within himself. The disasters of speculation; the flux and reflux of commerce; the sharp competition of traffickers; the feverish ambition, and the unwholesome public morals—courage without conscience, and seldom conscience with courage, enterprise without scruple, plausible avarice, sleek and greedy dishonesties, circumspect deceits, religion in form and depravity in fact—these are not the offspring of the soil, but of the street, the exchange, the shop, the office, and the store.*

Any land that has a large proportion of its citizens upon the soil, will not, in emergency, lack sturdy men. Nor will their influence stop within themselves; for, as an ice-mountain cools the sea and air for many a league around it, so a vast substratum of temperate, healthy-minded, industrious men, will send up a powerful though imperceptible influence into all the superincumbent classes of society.

The effect upon the character of being a subordinate or a principal is great. In a sense of responsibility, in taxation of intellect, in providence, in making provision for others; in short, in *developing* the man, by putting him upon his own foundation, and both tempting and compelling him to work by his own head, his own hands;—to be fertile in invention, to provide means for the execution of plans; to forecast, arrange, and discriminate for himself,—in all these respects, what other vocation has such power as that of husbandry?

Europeans, naturally, on hearing of the looseness and casual lawlessness of new settlements; of riots or brutal rencounters; of immense excitements in political campaigns, believe, either that we must soon

* It may be, that, in a better state of things than now exists, a separate estate may not be deemed so great a good as it now is; or interdependence be subject to such or so many ills. But whatever union may be desirable, it should be the union of independent men; nor should it ever destroy their individuality, or self-reliance, or self-development. It is union of strength that begets strength, not the grouping of imbecile dependence. While it is the duty of the strong to bear with the weak, it is the duty of the community to multiply the number of its strong and to diminish the number of its weak. What problem a future day and crowded population may have to solve, we know not. But in our day it is manifest that men would be made or saved, if our cities could be swept with a besom, and hundreds of thousands of lilly hands made acquainted with the plow, and thousands of necessitous expectants dispossessed of a mean shame for honest labor and self-earned livelihood.

come under coercive restraint, or go to pieces. The prediction would be true of any other people. It would be true of us if so large a portion of our new population were not independent land-holders. They are not like European peasants, trained to work under the direction of other minds, and made dizzy the moment they are left to their own; but are trained from boyhood to act under the guidance of their own judgment, without easing themselves by leaning upon others. Excitement may make them drunk for a night, but reason and repentance come with the morning. That very freedom which provokes to irregular action, also limits its evils. A freshet only *inundates* the level country, in which rivers have a wide vale on either hand; but rends and tears with irrepressible force when pent up in narrow limits. It is not the loss of popular equilibrium that is dangerous, but the want of elasticity to recover it again. A marble column, if bent by the tornado, falls; the tree, springs back again. When was there ever such a blow dealt upon a people, as we have received from the commercial embarrassments of the last ten years? Trade almost ceased. In many portions of the land money was unknown and barter was universal. There was sale for almost nothing that the soil produced; the plow rusted, the fat ox, unyoked, wrought no more, nor went bellowing to any market, where nothing could be had for beef, bone, hide, or tallow. It was during such a prostration (as tornadoes are engendered in barren and parched deserts,) that the political contests of singular power and excitement were bred which swept over the land. Close upon this, as if evoked from the vast and gloomy cave of storms, came stalking the gaunt and hideous spectre of Repudiation. Its brood came too, stay laws, bankrupt laws, valuation laws. What a condition was this. In our vast agricultural basin were poured together the thousands and millions of discordant, heterogeneous emigrants from every quarter of the globe. Before they had taken root, in the midst of half-cleared farms, upon villages of log-cabins, came in one storm, commercial disasters, political convulsions, state and personal bankruptcies. What has been the issue? A night of horrid storms has shut in upon a gallant ship, and the last light disclosed her amid dangerous currents and sinuous channels. We wait for morning, sure that she has gone to pieces. The storm has lulled, the sun comes up clearly; we hasten to the shore to find the masts, spars, and drowned mariners; when lo! there she rides before our eyes, some sails rent, some spars gone, but victorious over the storm, and seeking with full canvas the now open harbor.

Out of all these fierce dangers our rural population have come forth, more industrious, more circumspect of debt, more frugal, more independent and self-sustained.

The exuberance and abundance of our soil makes personal want, to any extent, a result of gross criminality, and public suffering from poverty almost impossible.

So vast is our territory—stretching thro' so many zones—that never is there a similar season common to all. If the winter is rigorous in New-England, it is often mild on the Mississippi. If drouth parches the farms of the North, the streams of the South are often overflowing with prodigal waters. In smaller territories, as in Great Britain, a season which dries up the resources of one portion, cripples all. But with us, the mischiefs of the worst season are partial; there is a good season in some part of our domain; and the abundance of other latitudes in our own land, flows in by ready commerce to relieve the want.

Nor is it a matter unworthy of regard that soil, climate, and the habits of our people, multiply the varieties of product on every farm, beyond what is elsewhere known. In Ireland vast masses of people lived upon one esculent, and that the cheapest. If any crisis occurred, being already at the bottom of the scale, there was no room for change. When a plague smote the potato-field, there was nothing left; there was nothing so cheap; nothing so abundant as the potato; no poorer food below it; no place of temporary retreat; nothing but the abyss of starvation.

But if our wheat fails, how many grains stand ready to compensate. There are six or eight staple articles *below* wheat (which

is the universal edible,) from one to another of which we can retreat if disaster falls upon our harvest fields. In short, the abundance of soil puts the average distance between ordinary plenty and want at so many degrees, that famine is a thing hardly possible in America. Indeed, we are to the world what Sicily was to Italy; what Egypt was to Canaan.

No words can ever convey a measure of this blessing to our understanding. We have never felt famine; never seen wasting men and pining children, in supplicating agony for a morsel of bread to expel from the stomach the torments of hunger. We have never wandered on the beach to search for bitter roots, nor parted the spoils of the forest with the swine. Because we have always had abundance, it seems no peculiar blessing more than the air which we breathe, the water that we drink. But, oh, of what value is one poor gasp to a dying man! How precious one drop of water in a burning desert!

If we except one or two small territories, the United States is the only place on earth where all, down to the very bottom of society, are *fully fed and well clothed.* We are to remember that our abundance is not extraordinary; contrariwise, it must annually increase. As more land is reduced to tillage, as every part of it is better cultivated, as science more thoroughly directs the farmer's hand, and new instruments of agriculture are invented, the harvests must wave broader and heavier, the scythe and the sickle grow brighter in the long labor, and the barn and granary, overcharged, refuse to hoard the immoderate abundance of the soil.

The world is to be fed at our hands. And famine shall be borne away, as a bird of prey upon a mighty wind, when the songs and shouts of our harvest-fields shall roll over the abodes of foreign wretchedness.

FOREIGN NOTICES.

Chinese Agriculture.—Much has been writin praise of Chinese Agriculture. No doubt they have been diligent cultivators of the soil from a remote period; and some centuries ago, when their agricultural and gardening operations were viewed by Europeans, they appeared to be superior to much that was practiced in the West. But like all their other habits and arts, agriculture has been, and still continues stationary amongst the Chinese; while in Europe, and in Britain especially, it has made great advances. The consequence is, that Chinese agriculture, as compared to British, is now far behind. It evidently appears a mistaken notion, too, which we have all along adopted, that every acre and inch of land in China is under a state of high cultivation. It is true that the level plains and hills of moderate height, are all under cultivation, and especially so in the neighborhood of cities. But Mr. Fortune, in his botanical excursions, roamed for many miles over mountains and ravines that were still in a state of nature; some of the hills were perfectly bare and rocky, and destitute of all vegetation; and others were covered with wild plants and brushwood. The houses of the peasantry and small farmers were also of a very mean description, built of mud and stones, with mud floors and very few domestic conveniences. The agricultural implements are of the simplest kind, and not in the very best condition; in short, every thing betraying a state of matters somewhat similar to what prevailed in Scotland some fifty years ago, when agriculture had not generally attained that perfection to which it has now arrived with us. The generally fertile soil, however, the favorable climate, and the really industrious habits of the people, are all conducive to an abundant production of the fruits of the earth over the whole extent of the country.

Rice is the staple production in all the valleys of the warmer southern provinces. As it forms a chief article of food among the Chinese, its cultivation is extensive. In the south, two crops of this grain are raised in the hot months, besides a crop of some more hardy vegetable in winter. The ground is prepared in spring for the first crop of rice, as soon as the winter grain crops are removed from the fields. The plough, which is commonly drawn by a buffalo or bullock, is a rude instrument, but light, and perhaps more suited to the kind of work than the British plough, which has been tried and found too heavy and unmanageable. As the land is always flooded with water before it is plowed, this process consists in turning up a layer of mud and water six or eight inches deep, which lies on a solid floor of hard stiff clay. The plough never goes deeper than this mud and water, so that the ploughman and his bullock, in wading through the field, find a solid footing at this depth below the surface. The water buffalo, generally employed at the south, is well adapted for this work, as he delights to wallow amongst the mud, and is often found swimming and amusing himself in the canals on the sides of the rice fields. But it must be an unhealthy operation for the poor laborer, who, nevertheless, pursues it cheerfully, and apparently happy. After the plough comes a harrow, without

long teeth like ours. The laborer stands upon the top of it, and its use is to break down and pulverise the surface of the muddy soil, and to press in the manure. Previously to the preparation of the fields, the rice seed is sown thickly in small patches of highly manured ground, and the young plants in these seed beds are ready for transplanting when the fields are in a fit state to receive them. Sometimes, especially in the south, the seeds are previously steeped in liquid manure. The seedling plants are carefully dug up from the bed, and removed to the fields. The fields are now smooth and overflowed with water to the depth of three inches. The operation of planting is performed with great rapidity. A laborer takes a quantity of plants under his left arm, and drops them in bundles over the land about to be planted, as he knows almost to a plant what number will be required. These bundles are then taken up in succession. A dozen plants are selected at a time, and plunged by the hand into the muddy soil. The water, when the hand is drawn up, immediately rushes into the hole, and carries with it a portion of soil to cover the roots, and the seedlings are thus planted and covered in without further trouble. In the south, the first crop is fit to cut by the end of June or the beginning of July. Before it is quite ripe, another crop of seedlings is raised in the beds or corners of the fields, and is ready for transplanting as soon as the ground has been ploughed up and prepared for their reception. This second crop is ready for cutting in November. In the north, where the summer is shorter, a different plan is followed. The farmers here plant a second crop two or three weeks after the first, in alternate rows. The first planting takes place about the middle of May, and the crop is reaped about the beginning of August. After the early crop is removed, the ground is stirred up and manured, and the second crop comes to maturity about the middle of November. In the Shanghai district, the summers are too short to get two crops of rice, but an autumn crop of vegetables is not unfrequent. Rain falls in great abundance during the change of the monsoon in May, and the Chinese are very expert at irrigation, so that during the growth of the rice, the fields are flooded with water. The terraced bases and sides of the hills are supplied with water by mountain streams, and the valleys by canals, the water being raised by a simple but very effective water wheel. The mountain terraces, which rise one above another like the steps of a stair, are so constructed both for facilitating the process of irrigation, and for preventing the mountain torrents from washing down the soil. *North British Review.*

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NANKING COTTON-GROWING.—The Chinese or Nanking Cotton plant—the *Gossypium herbaceum* of botanists, and the *Mie wha* of the northern Chinese—is a branching annual, growing from one to three feet in height, according to the richness of the soil, and flowering from August to October. The flowers are of a dingy yellow colour, and remain expanded only for a few hours. They are followed by the seed pod which swells rapidly, and when ripe, the outer coating bursts, and exposes the pure white cotton, in which the seeds of the plant lie imbedded. The yellow cotton, from which the beautiful Nanking cloth is made, is called "*Tze-mie-wha*," and differs little, except in color, from the other variety. The latter is chiefly cultivated in level ground, around Shanghai, in a strong rich loamy soil, capable of yielding immense crops year after year, although it receives but a small portion of manure. Early in spring, the cotton grounds are ploughed up, and manured with a rich mud dug from the drains and ditches. In the end of April or beginning of May, the cotton seed is sown, generally in broadcast, and trodden by the feet of laborers into the soil. The spring rains now commence, and the vegetation of the cotton makes rapid progress. During the summer months, the plants are carefully thinned and hoed. Much now depends on the season. If dry, the plants are stinted; but if refreshing rains fall, the crop proves a good one. The cotton plant produces its flowers in succession, from August to the end of October, and even in mild seasons, during November. As a succession of pods burst every day, it is necessary to have them gathered with great regularity, otherwise they fall upon the ground, and are spoiled. Little bands of the Chinese are now seen in the afternoon in every field, gathering the ripe cotton, and carrying it home to the houses of the farmers. As the farms are generally small, they are worked almost entirely by the farmer and his family, consisting sometimes of three or even four generations, including the old grey-haired grandfather, or great-grandfather, who has seen the crops of fourscore years gathered into his barns. Every member of such group has a certain degree of interest in his employment. The harvest is their own, and the more productive it is, the greater number of comforts they will be able to afford. In such a delicate article as cotton, much of the success of the crop depends upon a dry and mild autumn; for wet and cold are both inimical to it. When the cotton crop is brought from the field, it is spread out to dry, and then it undergoes a process to separate the seeds, which is done by passing it through a machine with two rollers. It is then put into bags, which, slung across a bamboo stick, are thus carried into the towns on the shoulders of the farmers, and dispos ed of to the cotton merchant. Every family retains a portion of the produce for its own use, and this the female members clean, spin and weave at home. The spinning-wheel and the hand-loom, both once so common in this country, are still in use in China, and to be seen in every village in the cotton districts. The cotton stalks are used as fuel, the refuse as manure, and the cleared fields are immediately planted with clover, beans or other vegetables for a second crop. *Ibid.*

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TO DESTROY MOLES.—I recently met with an efficacious mode of destroying moles. The directions I am about to give appeared in the form of a letter, in the "Sportsman's Magazine," a very creditable London periodical. The letter is short, so I quote it entire:—

"SIR—A correspondent of yours, some weeks since, put a query on this subject, which I have not seen answered, and perhaps you will find a corner for the following. I will answer for its efficacy.

"Take a quantity of fresh [earth] worms, put them into a wooden box, with a small quantity of *carbonate of barytes* in powder, and let them remain for an hour or two: then find out the runs where the moles leave the fences for the land, lay in every run five or six worms, and continue doing so as long as the worms are carried away by the moles. I was infested with moles before I used this remedy, which was about fifteen years since, but have never been injured since, by giving a little attention to them in the spring."

I communicated the above remedy to an English friend, and he has written to me, confirming its entire efficacy.—*Richardson's Pests of the Farm.*

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To protect Trees against Hares and Rabbits.—For years I have suffered by the destruction committed by these vermin among my apple trees: unless painted every year with train oil and hogs' lard, mixed over the fire to the consistence of paste, many thousands of my trees would have been destroyed. The above I have found the only efficient composition, after many trials of others recommended. The oil is injurious to trees, but the lard neutralizes its bad effect, and appears to prevent its penetrating the bark; still, the trouble of having 20,000 apple trees painted with a brush by boys, was very great; and I felt much pleased when visiting Mr. Dillistone last autumn, to learn from him that sundry pieces of rags tied to sticks, which I observed in his nursery, and about which I was inquiring, were *sulphured rags*, which had protected his trees from hares and rabbits, all the preceding winter. I must confess, however, that I felt incredulous, observing at the same time that, surrounded as I am by preserves, if they would protect my trees, I should feel perfectly convinced of their efficacy. In November last, I purchased a quantity of sulphur, collected sundry pieces of rags, which were cut into slips nine inches by six; these were put into cleft sticks (about two feet in length,) dipped into the melted sulphur, and the sticks with their miniature flags stuck into the earth so as to stand about eighteen inches out of the ground, round the quarters of apple trees, about three yards apart. Now for the result. We have had much sharp weather, in which hares and rabbits are generally very destructive, but not a single tree has been touched in those quarters surrounded by my flags of sulphur. Some straggling unprotected trees have been completely gnawed round, and in particular one solitary row of apple trees, which was forgotten, was entirely destroyed. I have, therefore, strong hopes that I shall never more have occasion to smear my trees with oil and grease, and other compositions, all of which are, to a certain degree, injurious; for oil, even when mixed with lard, often forms a coat over the buds on the young shoots, and prevents their breaking kindly. I have, in by-gone years, destroyed in my nursery more than three hundred hares and rabbits in one season. I have reason to be grateful for such a simple and efficacious mode of protection from their ravages.—*T. Rivers, Sawbridgeworth.*

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Dr. Hooker's Botanical Mission to India.—The increased and increasing patronage which the government of this country affords to science, is a subject of high satisfaction to all naturalists. This patronage is peculiarly evinced in the liberality with which the treasures contained in the British Museum, and those in the Royal Garden at Kew, are rendered available to the public good. In connection with the latter establishment, we have to announce that one of the most enthusiastic votaries of Botany, whose name stands at the head of the present article, has just quitted this country to further its interests. Dr. Hooker, having brought his "Flora Antarctica," part of the results of a previous voyage, to a close, has been appointed by Her Majesty's Government to investigate the vegetable productions of India, and especially of the Himmalaya mountains; and as a treaty is now in progress of negotiation between the British powers in Hindostan and the Chinese, with reference to the boundaries of Thibet, it is possible even the latter interesting region may be visited by Dr. Hooker in the course of his journey. The most important assistance, in exploring the botany of northern India, is promised to our traveller by His Excellency the Governor-General, Lord Dalhousie, and by the Court of Directors of the Honorable East-India Company. After spending about twelve months in this undertaking, Dr. Hooker's instructions are to return in 1849 to Calcutta, and thence proceed to Singapore and Borneo. At the latter island, the valuable aid of His Excellency, Mr. Brooke, and the protection afforded by H. M. ship Meander, (commanded by the Hon. Capt. Keppel, to which ship Dr. Hooker will be attached as supernumerary medical officer,) will enable Dr. Hooker to fulfil the designs of the enlightened First Lord of the Admiralty, Lord Auckland, who directs that he shall pursue his botanical researches and draw up a report on the vegetable productions of the British settlement of Labuan, and such parts of Borneo as can be safely explored. It is especially his object to ascend, if possible, the great mountain of Keeny Baloo, supposed to be 14,000 ft. in height. Dr. Hooker embarked at Portsmouth on the 11th of November, in H. M. steam frigate Sidon, which conveys Lord Dalhousie to Alexandria, *en route*, for Calcutta, and he may be expected to arrive there towards the end of December. Two or three months will probably be devoted to investigating the plains of Bengal, and particularly the fossil vegetable remains in the coal formation at Burdwan; and then Dr. Hooker will journey northward, perhaps to Sikkim, but his exact route must considerably depend on circumstances which it is impossible yet to foresee.—*London Journal of Botany.*

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Pears on Quince Stocks.—We have lately heard a little on this subject, but I imagine before long we shall hear a great deal more; my own information, you will perceive, is very limited, and my object is merely to draw attention to the subject. I shall also have to name Mr. Rivers, of Sawbridgeworth, several times, so that I may appear to some to be a commission agent of his; but I beg to say, although I have been in his garden, I have never seen him in my life, and I much fear he would not employ me as his advocate, if he needed one.

Before speaking of these beautiful little trees, I would call to your mind the very injurious effect produced upon the soil of hundreds of gardens, both small and great, by the shade of large old Pear trees; in fact, in many instances the ground is rendered almost useless.

Pears are generally many years before they produce fruit, and in small gardens they are unsightly, from being vastly disproportioned to the inclosure, and if any attempt be made at reducing them in size, their productiveness is sure to be destroyed, so that a small garden inclosed by walls is better without standard Pear trees. Under these circumstances the owner is deprived of the most valuable of all dessert fruits, for although the Peach and Nectarine may be higher-flavored, they can only be had for a small part of the year, but the Pear may be enjoyed all the year round.

Apples are also undesirable in small gardens, but they may be bought reasonably; but the fine sorts of winter Pears can only be obtained in large towns at large prices. If, therefore, a mode can be shown by which a large quantity of the very finest Pears can be produced from trees which, instead of being unsightly and injurious, are not only harmless, but extremely ornamental, a benefit of a very high order is obtained.

If any one doubts whether this can be done, let him send to Mr. Rivers for a few of his root-pruned, Quince-grafted, pyramidal Pear trees, and request him also to send his directions for the mode of managing their roots, as everything depends on this being done with judgment, and I will venture to say that he will be so pleased that next year he will procure as many trees of different kinds as he has room for in his garden.

These little trees are exceedingly tractable and manageable, and the process is so simple, that although every tree may require somewhat different treatment, yet there will be found no difficulty in deciding upon each case, and the pruning of a hundred of such Pear trees would be only an amusement for a lady, with a small pair of nippers, and the root-pruning under her directions might occupy a laborer half a day in November. The treatment is as follows:—Having procured the trees, and if for trial I would leave the choice to Mr. Rivers, plant them up to the insertion of the graft, mulch them, and water diligently from April, until they are thoroughly established, and afterwards in dry weather. I can say from experience, the fruit will be found as fine, as large, and as good-flavored as from a tree of 10 years' standing in the same ground.

In July, if any shoot grows longer than is consistent with symmetry, shorten it with the nippers or the thumb and finger to its proper limit, and if it produces a fresh shoot where shortened, cut that shoot back in October about the eighth of an inch beyond the place from whence the summer shoot sprung; but if several shoots have required shortening, and have also produced summer shoots, and not many blossom-buds have been developed, then the tree requires root-pruning.

It is not a good practice, as recommended by some, to leave all the terminal shoots to draw the superabundant sap from the blossom-buds, because being left growing they also greatly strengthen the roots and enlarge the stem of the tree; whereas, if root pruning be duly attended to, there will be no danger in shortening all the shoots in July.

If the tree makes only a few inches of wood, and the terminal buds are blossom-buds, they are not to be shortened, nor are the roots to be pruned. If the tree is not symmetrical, and requires a shoot or two to balance it, make a deep notch over any dormant eye, and it will break next spring.

In shortening any shoot, consider whether you would like the new shoot to be right or left of the pruned shoot, and cut to an eye accordingly; but if the tree is pretty well balanced, any shoot that is shortened should have the last eye downwards, which has a tendency to check luxuriance by inclining the growth from the perpendicular line. Aim eventually to make your tree about 6 feet high, or 7 feet at the utmost limit, and from 2 feet to 2½ feet wide at the broadest part, which will be at 1¼ foot to 2 feet from the ground in a well proportioned tree, although the branches will begin to grow within 6 inches of the ground; from the broadest part it should taper regularly to the top.

As soon as this point of growth is attained, root-prune more severely than before, causing the tree to produce nothing but blossom-buds; it will thus become a full-grown, full-bearing, Lilliputian or miniature pear tree for a century. Is this true? If so, how beautiful and how profitable! If false, let reasons be given why it cannot be effected. It is said it may be done in France, but not in the moist climate of England; but if I can get a tree 3 feet high, and in six or eight months from the nursery, to produce a full crop of fruit of full size and excellent flavour, merely by transplanting or root-pruning, why not at 6 or 7 feet? because a tree once brought to a full bearing condition, the habit may be perpetuated, provided the means which produced this habit be continued.

I have lately seen a row of Pears on Quince stocks of 16 to 20 years' growth, grafted low, and another row grafted standard height; in both cases the branches are drawn down almost to the ground, but ever since they were planted there has been open warfare between them and the pruner, the tree constantly shooting upwards or naturally, the gardener saying—No, you must grow downwards or unnaturally, and so cutting off the upright growths in winter, not daring to do this in summer; this luxuriant growth being thus far indulged, causes proportionate vigor in the roots and a great increase in the size of the trunk; there are consequently roots and a trunk adapted to a tree of 25 or 30 feet high, whereas the poor tortured thing is never suffered to rise above 7, presenting the unsightly appearance of a kind of Brobdignag dwarf or stump, instead of the Lilliputian I wish to introduce to your notice and protection.

That these Brobdignags bear fruit I do not deny, but that they bear as fine fruit as a tree with a stem proportioned to its head, and with roots proportioned to both, and growing in a natural form, and with the features of a full-grown tree, requiring little or no pruning, I do certainly disbelieve; and I can safely affirm I had finer fruit from my Lilliputians than I could find on the Brobdignags.—*F. Y. in Gardner's Chronicle.*

DOMESTIC NOTICES.

Rural Architecture—Architects' Terms.—We are glad to perceive among the advertisements of this number, that of one of our first architects, Alexander J. Davis, Esq., giving details of terms for various professional services. We know very well, from personal observation, that a large number of country gentlemen, possessed of more or less taste for fine buildings, are deterred from calling in professional talent to their assistance by vague notions of the great expense of such services, etc. Many a dwelling just escapes being beautiful in its proportions and correct in its details, by this mistaken economy. A comparatively small sum, paid at the commencement, to an architect of ability, ensures permanent satisfaction to the proprietor of a tasteful house, and gives to the whole community an agreeable object instead of an ill looking and clumsy one. We very well know that the majority of mankind conceive they have certain good ideas in domestic architecture—in "building a house of their own"—not excelled by those in the possession of others. A single trial, and the perplexities of building without proper plan or advice is, however, generally sufficient to undeceive them on this point, and to prove to them that architecture is not an art intuitively understood by all men.

Mr. Davis has had very extensive experience in his profession. The University of New-York, and the capitols of several of our states, are examples of his ability in public buildings; while some of the most elegant villas and cottages in the country (for example those of Col. Rathbone, Albany, S. B. Warren, Esq., Troy, Mr. Harold of Bridgport, S. E. Lyon, Esq., of Westchester, and many others,) are well known examples of his talent in domestic architecture. For invention, and scientific knowledge of his art, we do not know his superior in this country, and we recommend gentlemen about to build to visit his rooms at the Merchants' Exchange, New-York. They will find there a great variety of original designs for cottages and villas, and Mr. Davis, we are glad to be able to say, is, aside from business, as truly desirous as ourselves to contribute to a general diffusion of good taste and correct ideas in the beautiful art which he practices.

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Wine-making in the West—Corrections.—Our proof-reader found great difficulty in some parts of the MSS. of Mr. Longworth's interesting notes on "Wine-making in the West," in our last number, and Mr. L. has sent us some corrections which he desires to make, and some additional information, as follows:

"At p. 316—for *Herbemonts, Madeira*, read *Herbemont's Madeira*. At p. 317—first paragraph—for "not as abundant leaves," read "not as abundant bearers:" p. 318, for "a few weeks after working," read "a few weeks after making:" same paragraph, "40,000 bottles," should be "4,000:" p. 319 reads, "for years the blight has given us but little trouble." If so written [it is, Ed.] I have certainly said what I did not intend. What I should have said, is this, that the rot had given us no serious trouble till the last few years.

There are some points in which I differ from Mr. Elliott's remarks. In preparing the ground he objects to "putting all the top-soil at the bottom," and deems it better to mix it. I hold the contrary. Say you trench 18 inches deep, and have 14 inches of rich soil on the top, and a clay bottom; I throw the rich surface soil below, and have the 4 inches of clay on the top. The object is to prevent the roots growing within four inches of the surface. In Europe they yearly cut off all the roots near the surface, for, if allowed to remain, the lower roots become stationary, and do not grow, and in dry weather the upper roots suffering, the grapes shrivel.

In my vineyard the plough or cultivator is seldom used, the vines being planted too close to permit it. No vegetables are planted between the vines after the second year.

For the manufacture of pure Champagne, the juice, or must, should be taken from the press, and it is not fit for market till it has been operated upon for seventeen months, and if three or four years old the better. It is a tedious business, and the breakage of bottles in the coolest cellars is enough in some seasons to ruin a Jerseyman. The house in which I now manufacture it, was built with an arched cellar, expressly for the purpose. I find the building, though 40 ft. by 50, and two stories high, not large enough, and if my manufacturer succeeds, I shall build one of double the size, and a cellar two stories deep next fall. Yours with regard. *N. Longworth. Cincinnati, Jan.* 9, 1848.

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Greenhouse Plants in Pits.—There are doubtless many of your readers, like myself, who would like to keep *Salvias, Petunias, scarlet Geraniums*, and many other tender plants, through the winter, in order to "bed-them-out" and enliven the flower garden in summer with their gay and perpetual bloom, and who have no green-house to effect this object.

Such persons may be glad to know, from one who has tried it, that a *pit* is the thing for their purpose. It may either be of good stout plank, or of brick laid up eight inches thick. Mine is of the cheapest and simplest kind, being made like a common hot-bed frame, only there are strong posts at the corners and intervals, and inch and a half plank for the sides. It is 12 feet long and 4 feet wide, and 3 feet deep. The front edge is just level with the surface, or a little above it, and the back edge is about 4 inches higher. This is for the top or outside lights—for the pit must have *double sashes*—the lower tier of sashes is 4 inches below the upper.

The outside of this is lined with tan about 2 feet deep and up to the level of the upper sashes. When

the weather is mild, and entirely without frost, I open the sashes and admit light and air, but for the greater part of the time, and always in cold weather, I keep both tiers of sashes close and well covered with a layer of 12 inches of rye straw. This, I find, keeps out the cold effectually—and as the spring advances, I gradually open and enure my plants to the light and air.

They are all in the finest order in April, and when planted out for summer growth, from being kept dormant all winter, grow more luxuriantly, and flower better than those kept in the green-house with fire heat.

I ought to add that, if the soil where the pit is made be wet, or retentive of moisture, there should be a slight drain made from it. The bottom should be covered with coal ashes, or sand, on which to place the pots. When they are first put in in Oct. they should have as much air as possible when the weather is not positively frosty, to harden them. Yours, *An Amateur. New-York, Jan. 4th.*

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Flowering Hawthorns.—Why do we so seldom see the many fine varieties of this lovely shrub in our gardens and shrubberies? Surely nothing is more pure and beautiful among shrubs than the Double White Hawthorn, with clusters of blossoms like *miniature double white roses*—or the single and double pink, or the double crimson. A little pruning—better still, *pinching off* the ends of young shoots—will give the hawthorn when planted out singly—it is naturally of a rambling habit—a neat and even an elegant form. It is one of the prettiest small trees for a lawn in places of moderate size. Yours, *An Amateur. New-York, Jan. 4th.*

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The best Manure for Fruit-Trees.—I have read with the deepest interest the leading article "on the philosophy of manuring orchards," in the last number. It has given me a great deal of new light, and I am satisfied that it will lead to experiments and trials in the hands of skilful and attentive cultivators that will greatly benefit all orchardists and fruit growers. But I have but littte time for my garden, and only snatch, now and then, an hour for my fruit trees from other avocations. Will you have the kindness, therefore, to say in a few words, what mixture or compost of manures you consider safest and best for *all fruit trees?*

Cincinnati, O., Jan. 1848. Yours, *E.*

[Answer.—The best compost for "all fruit trees" (without endeavoring to suit the specific wants of each particular fruit,) is a compost of *peat* or *swamp-muck*, reduced, or rendered available to plants, by *unleached* wood ashes. The peat should if possibe be dug and carted out in winter—though it will answer if dug in the spring. As early in the spring as is convenient, mix thoroughly the wood ashes with the peat, in the proportion of five bushels of good hard wood ashes to one wagon load of peat. Let the heap lie a week, turn it over to incorporate more thoroughly, and in two or three weeks it will be fit for use. This compost, or manure, contains largely lime, potash, phosphate, and vegetable matter, the elements most necessary to the growth and health of fruit trees generally—and all in a state ready for food for these trees.]

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Queries from the West.—Is the *Tree Pœony* a proper out-door plant?—that is, does it thrive and flower well, and does it withstand our winters when thus treated, and what is the best method of cultivating and propagating it?*(a)*

The Noisette, Bourbon and Hybrid Perpetual Roses I have introduced into my garden lately, all proved fine, and every thing that could be wished, with but one exception, although most of them did not flower much after August: the *Lamarque* Noisette, however, I must except, for it has proved thus far quite worthless. There were many buds on it, but they would *all* blast and drop off just before opening, so that I could not get a single bloom from it. It may not be genuine, but the buds seemed to be of the color named in the catalogues, so far as I could judge. The Cloth of Gold, and Solfatare, were especially fine—the first is considerably the largest, and Solfatare has the most vigorous habit; otherwise they are very similar.*(b)*

Among the finest of the others I received, I would mention the *Marquis Bocella*, *Duchess of Sutherland*, *Mrs. Elliot*, *Prince Albert*, and *Souvenir De La Malmaison.*

I should like very much to hear more about the Rose-bugs, whether they are not very destructive to roses at the east, and especially among the old nurseries and gardens about New-York city. They are not just here as yet, but I have seen thousands of them not a hundred miles distant; and when I see and hear of their ravages in some localities both east and west, I am almost tempted to despair of cultivating roses extensively.

Will you please tell us how it is with them where they have been known so long—whether they are not very numerous and destructive—and if so, how they are kept down?*(c)*

Have there been any Native American Grapes discovered, which are superior to the Isabella and Catawba for this latitude, or any better Raspberries than the red and white Antwerp, or are there *any as good that are hardy;* or any better variety of Currant, of the different colors, than the red and white Dutch, (which, by the way, so far as I have tried them, are not a whit different from the largest of those *commonly* and *generally* cultivated,) and the Black English? If so, will you please name and describe them? I find, annually, almost any quantity of new names, with high recommends *in the catalogues*, but I cannot hear any thing further about them. Very respectfully, yours, &c. *F. K. Phœnix. Delavan, Wisconsin, Dec.* 1847.

Answers.—The Tree Pœony is one of the finest of hardy shrubs, and bears the winter here without the slightest protection. In the coldest parts of the Union, it may, perhaps, need the protection of a few branches of evergreen thrown over it in winter. It grows freely in any good rich garden soil—and its magnificent flowers, some of them with a circumference as great as a man's hat, are produced with the greatest regularity and abundance in May. It is propagated by sucker layers, or by grafting the young wood in July on bits of tubers

of the common Pæony—the grafts being placed under glass till they have united. The latter is the most rapid mode known.

(*b*) The *Lamarque* Rose will rarely produce fine flowers while the plant is young—but as it gets older, and the flower buds come on spurs or side-shoots of old wood, they are uniformly fine and bloom well. Hence the plant should be trained high and the long shoots protected in winter.

(*c*) So far as our observation extends, this insect is only troublesome in districts where light, sandy soil abounds. In such soil they find winter waters so genial, that they multiply to an incredible extent. In loamy or heavier soils, they are seldom troublesome. It is certainly one of the most difficult insects to destroy. And when it abounds greatly, perhaps the only effectual way of destroying it, is to watch closely at the time of their exit from the soil—about the 1st of June—pour boiling water over the soil at the roots of the trees and rose bushes where they rise.

(*d*) No better *hardy* native grapes than the Isabella and Catawba have yet been originated. It is the desideratum of the day—and many are engaged in endeavoring to produce new varieties of merit.

(*e*) There is no better Raspberry yet known than the *true* Red Antwerp—the Fastolff is as large and very handsome, but not quite so firm in texture. Knevett's Giant is quite hardy—large and fine. The large White and Red Dutch are yet on the whole, the best currants—though May's Victoria really bears larger clusters of berries. The true Red and White Dutch are nearly twice the size of the common red and white currants of country gardens. We have grown them side by side in the same soil.

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PEARTREE BLIGHT.—Mr. ERNST, in his article on pear blight in the last number, says "the idea is mostly abandoned that any form of blight is caused by insects," and that in lieu of that idea the frozen-sap theory is adopted, which to a limited extent explains the evil, and also intimates that his theory of the summer-sun's rays scalding the sap, is the other cause of what he calls the fire blight."

With his opinion "that insects do not cause any form of blight," I beg leave to differ, and in support of my views illustrate by cases—which, if not satisfactory to him, may prove interesting and elicit opinions from others.

Case 1st.—A *Bergamot d'Esperin* pear tree, one year from the bud, on quince roots, imported into Boston for me by a friend, from the interior of France, and planted out late in the spring of 1847, not the least indications of frost being seen afterwards, appeared in perfectly healthy condition, and grew from the leading bud of the stem. After the new wood had attained to a growth of seven or eight inches, the extremity of the stem with its leaves suddenly turned black. After two inches had become affected, I amputated at a point one inch below the discoloration. The remainder of the stem continued fresh and green for several days, when the disease reappeared. I repeated the amputation as before, and again the disease showed itself, when I concluded to abandon it to nature; the stem died down to an inch or two above the bud's insertion, where a complete line of demarkation formed, and with the dead wood on, a dormant bud bursted, and a new stem of six inches grew before autumn.

Case 2nd.—A *Colmar d'Aremburgh*, two years from the bud, on quince roots, imported from Mr. Rivers, arrived and was set out quite late, not the slightest appearance of frost being seen afterwards; came out in full leaf, foliage indicating perfect health. No new wood appeared until about the middle of July, when a vigorous and healthy shoot grew from the leading stem. After it had grown to a length of six inches the extremity turned black as in the first case, and in less than a week the whole tree was killed. This tree was of pyramidal form, well branched, about four feet high, and protected from the sun by large trees and bushes.

Case 3d.—A *Colmar d'Aremburgh*, grafted on my own grounds on pear stock, in 1846; taken from the nursery bed and set out as a standard the same autumn. This tree was about four feet high, stout, healthy and well branched, but made no new growth until after the middle of July, when the leading bud started. After it had made a growth of about five inches, I noticed the same peculiar appearance of discoloration of leaf and wood first commencing, when I immediately amputated the whole of the new growth, which saved the tree, for soon after a dormant bud adjoining the base of the amputated limb, burst forth and made a shoot of three inches before autumn.

Case 4th.—A *Bartlet*, on pear roots, six years from the bud, bearing fruit and in perfect health, sent out new wood from its whole top. After the new shoots had attained their growth and were mostly over six inches long, I noticed the same symptoms of disease appearing in the extremities, as in the other cases, and amputated the whole length of the new wood, as the disease showed itself. This invariably put a stop to it. This tree was not attacked until early in September, about which time we had several cold mornings, the mercury going as low as 38°. On one of these mornings, quite early, and before the sun had warmed the air, I noticed a limb, the extremity of which appeared affected, and amputated it, when I discovered its whole end and about one-fourth of an inch of its length covered with a scaly looking insect, in shape resembling sowbugs, but of a brown color and quite small. They appeared to be chilled by the cold air, for the moment they were brought to the full rays of the sun they skipped off like fleas. The wood from which they were taken was just beginning to show symptoms of the disease, and when cut in two emitted its peculiarly nauseous aroma. The trunk of this tree shows no symptom of the other form of blight, and appears now in perfect health. In several other of my standard trees, limbs were affected and treated similarly, all of which appear now in health. As the Bartlet was the last tree affected, and the limb on which I discovered the vermin the last one amputated, I had no opportunity of continuing my observations.

The above cases, with numerous others which came under my observation last summer, sufficient-

ly indicate to me the cause of this species of blight. Frozen sap it could not have been, as two of the trees were imported and set out in the spring, after all frosts were over, and the new wood was invariably first attacked. The sun's rays could not have induced the disease, for if so all the limbs of a particular tree would probably have been affected at one time, and the Bartlet was not affected until September, when the sun's rays have comparatively little power, and its limbs attacked at different times. But does not the discovery of the vermin settle it conclusively? It does to my mind. And the remedy is as certainly indicated—that is, amputation with a *clean knife* several inches below any appearance of discoloration. I say with a *clean knife*, because I am certain from observation that the small quantity of diseased sap which adheres to the blade is sufficient to poison a healthy limb.

As to the theory of frozen sap blight, and sun-blight, for the other and by far the most serious blight of the pear tree—that which first makes its appearance on the body of the large branches and the trunk of the trees—I do not as yet intend to express myself. I only wish at present to propound a question or two for response from yourself and Mr. Ernst.

If frozen or scalded sap causes this form of blight, why is that as a general rule, bearing trees, or those of bearing age, are the only ones attacked? That this is so, experience has abundantly proved. I have now growing over two hundred and twenty varieties of the pear, and probably more than five hundred trees, full four-fifths of which are young and have not yet borne. I have never known a case of this species of blight attacking a tree which had not blossomed or borne fruit. Ought not the bark of the young tree to be more sensitive to such influences than the mature and hardened bark of older trees? I am perfectly well aware that the outer bark of young trees is often, as it were, burned by the winter sun, but this is not blight; for it is always seen in early spring and with proper care, that is, excision of the injured bark and a coating of shellac over the wound, seldom or ever materially injures the tree. That it may be understood what I mean by blight, allow me to describe it as it appeared among my trees at Albany last summer. In its first stage the outer bark of a large limb or trunk of a bearing tree showed separate or continuous patches of a dark brownish colour, with raised or circumscribed edges, presenting precisely the appearance of an erysipelatous inflammation in the human subject. If cut into there was an abundant exudation of viscid and nauseous sap, emitting a peculiar odour. In a few hours this stage of the disease passed, when the bark became shrunken and assumed a much darker color, verging to black. If discovered in a limb during the first stage, amputation at the junction of the limb and trunk checked it in some cases, but if the trunk was attacked we left it to nature. In most cases the tree was completely killed in a short time, but in some a line of demarkation formed a few inches above the ground, when new buds bursted and threw out limbs. At that stage I amputated near the new bud and covered the wound with shellac. Those trunks appear now to be in a healthy state. The disease made its appearance in June and continued to show itself throughout the summer and autumn. Trees of many varieties were attacked—those native to the country as often as those of foreign origin. Mr. E. excepts Seckels from the disease in Ohio, but I cannot do this for Albany, as they appeared to suffer equally with other varieties. Last winter was an unusually mild one for this climate; peach trees, which are generally injured, were not winter-killed in the least. From this fact you can draw your own inferences. Yours, very truly, *Herman Wendell. Albany, January 10th*, 1848.

Remarks.—We stated, in commenting on Mr. Ernst's excellent article in our last, that we differed with him with respect to *insect blight*, we believing insects to be a fertile cause of one form of blight in some portions of the country. The able article (see page 385) of Dr. Harris, of Harvard University, one of the most skilful and accurate observers in the country, reaffirms and settles this point.

It is perhaps well enough to repeat here that, from various sources of information, we are inclined to believe that the insect blight is much more prevalent in the sea-coast states than in the western states.

Dr. Wendell is no doubt quite correct in supposing the pear blight, which was last year so destructive to this tree about Albany, to have been partly owing to insects. After perusing Professor Harris's contrasts of the characters of the different forms of blight, he will no doubt be able to judge more accurately how far insects must be held accountable for the disease in his trees.

We are still, however, strongly inclined to believe that frozen sap was the cause of blight in some of the large trees in his grounds. "A mild winter"—that is, a winter with sudden and great fluctuations of temperature—in a climate like that of Albany, is perhaps more fatal to a tender-barked tree than one of uniform low temperature. Take the present season for example. The winter here has been one so mild that there has scarcely been a week that the transplanting of large trees might not have been carried on—the ground being only frozen two or three inches. Yet at Albany, on the 12th or 13th of January, the mercury sunk as low as 22 deg. below the zero of Fahrenheit. This was perhaps followed by bright weather, and in trees exposed fully to this great alternation of frost and sun, we think frozen sap blight would be very likely to occur.

We have seen hundreds of young pear trees, two years old, killed nearly to the ground with frozen sap blight. But with the more active vital powers possessed by them, they more easily recover from its effects, when the diseased parts are amputated, than older trees.

Our own observation leads us to coincide with Mr. Ernst in considering the *Seckel* usually almost exempt from the blight. But when a disease occurs in a neighborhood, in a more than usually malignant form, individuals usually exempt often fall victims to it—and this, we think, accounts for the exception stated by him, to the general sound health of the Seckel pear tree.

Dr. WENDELL also informs us that he has this winter protected with straw bands many of his most valuable young trees, and we hope he will give us in due time the result of this experiment

In conclusion we repeat that we now believe the pear blight to be caused in three ways, viz: by insects—by alternate freezing and thawing in winter—and by the sun's rays in summer. The ingenuity of all good cultivators must be tasked to invent simple preventives and remedies for these various forms of a disease which this tree, cultivated with so much ease in some parts of this country, suffers so greatly from in others. ED.

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NOTES OF RASPBERRIES.—In your Dec. number, page 266, you have corrected two *supposed errors* in my article, but in both cases you labor under misconceptions. You have *a* common red raspberry at Newburgh, which is the *Rubus strigosus*, a native growing abundantly in your vicinity, and which propagates itself by suckers; but *the* common red raspberry, long enumerated as such in the catalogues, and grown in immense numbers for market around New York, and especially on this Island, where acres on acres are to be found, and which constitutes 19-20ths of all the supplies of the city of New York, not only for the table but for raspberry brandy, is *a totally distinct species*, [Will Mr. PRINCE tell us what species it is? ED.] having no affinity to the *Rubus strigosus*, but possessing the characteristics named in my last article, and it is allied to no other in habit but the common black cap, (Rubus occidentalis,) to which it is so similar in growth as scarcely to be distinguishable when the fruit is not on the plant. Its shoots are perhaps of not quite so deep a red, and rather less spiny. The fruit is red and larger than the black cap. It is the same variety that is still called "English red" in some catalogues, and was generally so called until I exposed the error about 15 years ago. This inexcusable misapplication of title had sprung into existence when our States were colonies, and were in the habit of receiving the fine varieties of exotic fruits from England alone, and when the silly idea prevailed of European superiority in the vegetable kingdom, which some were even weak enough to apply to the animal kingdom also. Our best native grapes, the Bland and others, were then termed "English;" the Persian Walnut or Madeira nut was called "English Walnut," and so of other fruits. Even the Isabella Grape, when first brought prominently before the public, was claimed by a French writer, (whose article was published in the American Farmer) as an old and familiar acquaintance from some part of France.

The "Common Red" Raspberry of this Island, which is a native of the Catskill mountains, is not adverted to by Torrey and Gray, which would indicate that they deemed it a variety only, and as I have already stated it is allied to none other than to "Rubus occidentalis." *The "Rubus Pennsylvanicus"* spoken of by me, is not *the "Rubus Pennsylvanicus"* referred to by Torrey and Gray, but a totally distinct species, which they appear to have omitted to notice. It has doubtless escaped their attention on account of its being so rarely met with. I never have yet seen the true *Rubus Pennsylvanicus*, but at one garden besides my own. The Canadian Raspberry referred to, is also a *distinct species* widely different in its habit, and very distinct in the flavor of its fruit from all others. It seems also to have been omitted by Torrey and Gray. Among my seedlings, I have two plants which are hybrids between the Fastolff and Ohio Everbearing. They are of remarkable character, having all the vigor of growth and color of the wood of the former, but singularly enough, they possess the American propensity to throw down the ends of the branches and form new plants therefrom. They withstood the last winter unprotected, and are left exposed the present one.

While discussing as to the Raspberry, I will explain a point but little understood concerning the "Red Antwerp" variety. Many suppose, from its title, that it is of Belgian origin, and consequently very hardy, whereas in fact it is a native of the Island of Malta. The great object to be attained in our attempts at seminal improvements, is the production of varieties equal or superior to the largest and finest known, and at the same time so perfectly hardy as to endure our severest winters.

The most hardy of the European varieties, are the Franconia, Knevett's Giant, Fastolff, the Black hybrid (of Rivers,) and the German Black. The White and Red Antwerp require to be somewhat protected by binding in straw, or covering with earth, and in very severe winters it would be better if the others were protected also, as it preserves every part of the canes in a perfect state, and it in reality exacts very little extra labor.—*Wm. R. Prince. Flushing, L. I. Dec.* 13, 1847.

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WM. PENN CHRYSANTHEMUM.—I observe a query in the last No. of the Horticulturist, respecting origin of the "Wm. Penn Chrysanthemum."

This favorite Chrysanthemum originated with Mr. ROBERT KILVINGTON, one of our most enthusiastic gardeners. It was exhibited for the first time, before the Pennsylvania Horticultural Society, at the stated meeting of November 16, 1841, and received, as it justly merited, the premium for the best American Seedling. The committee remark in their award on the occasion, "that this prize Seedling Chrysanthemum is decidedly the finest variety ever presented to this society, of a beautiful Ununculus form, and pale shaded pink color." In all our Chrysanthemum shows, this variety enters into every collection, and is considered one of the choicest. Very respectfully, yours, &c. *Tho. P. James. Philadelphia, Jan.* 14.

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NOTES ON DOWNING'S "COLOURED FRUITS AND FRUIT TREES."—Among the various admirable features of man's inner constitution, there are few productive of more pleasure than the power of association; that faculty by which a picture, a word or a tone, will bring before the mind, with life-like reality, scenes, persons and things, entirely unconnected with present circumstances.

The exercise of this faculty has just been called into requisition; as, seated by a glowing fire, and with a strong impression of cold and dreariness without, we have turned over these highly finished

engravings. Their accordance with nature, and their faithful colouring, awaken many a vision of early summer, with its bud, and bloom, and fresh vegetation; of summer evening winds, and the luscious flavor of cherries, plums and peaches, whose fair proportions and rich colours are here presented so temptingly; of

"Our clear and pleasant autumn time,"

which brings its share of palatial delicacies, in the shape of rich and spicy pears and apples, whose beauty might well rival those of Hesperides.

And, with our thoughts of these fruits, and their seasons, are mingled recollections of so much quiet enjoyment, in watching the progressive advance of vegetation, and the change of fruit from day to day, until it reaches perfection of growth and ripeness, that we readily express our obligations to the author for these engravings, and only wish there were more of them.

We very much doubt whether, in any country, the culture of fruit is pursued with as much ardor, or critical discernment of its distinctive qualities, as in this country.

In the vicinity of Boston, there seems almost a pear-mania; which, fostered by the Horticultural Society, is establishing in this country the culture of many excellent varieties of that fine fruit. The pomological knowledge of some of the members of that society is here of practical benefit; and CUVIER, in the Parisian Halls of Comparative Anatomy, scarcely described with more enthusiasm the structure and habits of the subject before him, than our friend, the *secretary*, comments in the society's committee-room upon the delicacy and flavor of a favorite pear. In Cincinnati the mania, if it may be so called, has centered upon the *strawberry;* and the various discussions upon its characteristics bid fair to equal a dispute concerning the difference between *ille dixit* and *dixit ille*. Amid this general interest in fruits, these engravings will, doubtless, be welcomed and valued by all amateurs. They number more than seventy, and include many of the most esteemed and choicest varieties. The *Early Harvest* is an excellent representation of one of our finest early apples. The *Gravenstein* is finely touched; and the little *Lady Apple* has all the beauty which has long made it a favorite ornament for the table. The *Baldwin* we thought rather too red; but the *Yellow Bellflower* is exceedingly true to nature. Our favorite *Esopus Spitzenberg* is also there; but we miss the world celebrated Newtown Pippin—the very best of our Long-Island fruits. The *Moorpark Apricot* is well done, and is deservedly praised.

Among the cherries, we noticed a good portrait of the *Black Tartarian*, and that fine sub-acid cherry—*Carnation*. *American Amber*, the child of this town, is well coloured, but we think is rather smaller than that fruit. This is, however, a safe fault, and evinces an absence of any desire to exaggerate.

Among the plums, *Jefferson* is really beautiful; and our fine native plums—*Columbia* and *Lawrence's Favorite* are very correct. *Coe's Golden Drop* and *Smith's Orleans* are also well portrayed.

Among the pears, we may especially notice the high flavored *Seckel*, *Dix*, and a life-like representation of *Bartlett*. *Buffum* is very good; and *Fred'k of Wurtemberg* is very true to life—standing out very boldly from the paper.

Beurre d'Aremberg and *Flemish Beauty* are superbly executed; and their russet spots and dashes are touched with a high degree of artistic skill. The author's locality must have changed the colour of the Bloodgood; for his representation is quite green. Here, in its native soil, it has a decided russet. [No; the error in colour is one of the artist's, and is, we believe, found only in a few copies. The original drawing was a fine russet yellow. ED.]

Among the peaches, the Royal George is coloured with much skill; and we should like to see more engravings of this finest class of our American fruits.

We can, perhaps, more readily appreciate the excellence of these engravings, from some experience of our own, of the great difficulty of obtaining good artists to colour them, either here or abroad. To be executed well, they should be coloured entirely by hand; and are constantly liable to incorrectness, unless under the actual supervision of a competent judge of fruits. The drawings are very good; and the arrangement of light and shadow impart to them quite a tasteful appearance. We think these engravings will tend to increase horticultural taste; and we truly hope their success may be such as to induce the author to give the public another series, to contain other highly esteemed varieties. *S. B. Parsons. Flushing, L. I., Jan.*, 1848.

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NEVERFAIL, OR RAWL'S JANNET APPLE.—Mr. DOWNING—I see, in your December number, a set of "Rules for American Pomology;" said to be adopted by the leading horticultural societies of the country. If these rules are to govern us in naming fruit, neither our Kentucky friends, nor myself, can be gratified with regard to our favorite names for the apple which stands at the head of this article. For one of these rules says:—"When two persons have named, or described a new variety of fruit. then the name and description first published, if according to the rules herein indicated, shall have the priority." Now, Mr. *Andrew Hampton*, an old nurseryman, near Richmond, Ia., has described, in the "Western Farmer and Gardener," published at Cincinnati, O., forty-one varieties of apples, which he had cultivated. In the 1st number of vol. iii., p. 14, published Nov., 1841, he has the following description of the apple under consideration:

"39. NEVERFAIL.—Midling size; form round, somewhat long, lessening towards the crown; colour red and yellow striped; the flesh is tender, juicy and well flavored. It keeps equal with the Newtown Pippin or Winesap. They are near two weeks behind common apple trees, in the spring, putting out leaves and blossoms; not considered among the best bearers; but sometimes, when all other apples have been killed by the early frosts, this has been well loaded with fruit."

As we conceive this description to be in accordance with the rules above referred to, and as it was published some six years in advance of any other, in a horticultural paper of the largest circulation in the west, NEVERFAIL is henceforth to be the name

of this fruit; and *Rockremain* and *Rawl's Genneting* will have to give place.

The only objection I have to the above description, is that part which says, it is not "considered among the best bearers." This may all be true, in Mr. Hampton's soil and situation; but with us, it is a profuse bearer. It bears such loads as to be rather an objection to it than otherwise; as it renders much of the fruit under size, and hanging in such clusters permits the insects to borough among the branches, and by biting it renders considerable of the fruit knotty and imperfect. Owing to these facts, I at one time did not consider the Neverfail worth cultivation, and actually cut down several trees. But since I have discovered its power to resist the rot, which has, of late years, attacked the apples of this country, I have changed my opinion. And, as it regards the "universality" of the name to which you refer, in your last, I will pledge myself that this apple is called, in the west, Rockremain, or Neverfail, by ten nurserymen and orchardists to one that calls it *Rawl's Genneting*. Yours, &c. *C. Springer. Meadow Farm, Ohio, Dec. 29th, 1847.*

Remarks.—If our correspondent will examine the "Rules of American Pomology," he will find that the description of this fruit, given in the Western Farmer, is not properly a description; it is only a fragment of a description. According to Art. III, of the Rules, "no new native fruit shall be considered named, until it is *accurately described in Pomological terms*," etc.; and Art. IV specifies the points which must be mentioned, in order to constitute such description.

Mr. Hampton's sketch of this fruit does not come within these rules; and he evidently only intended it as a sketch, and not a full description.

The "Rules of American Pomology" are not intended to govern the past, but the future; and strictly can only be said to apply to any period antecedent to their adoption. We confidently look, however, to their preventing much confusion, and the adoption of many indifferent fruits hereafter. Ed.

MASSACHUSETTS HORTICULTURAL SOCIETY.

A stated meeting of the Society was held Saturday, January 1st, 1848.

President Wilder in the chair. The President read the records of the last meeting.

The Chairman of the Executive Committee submitted the list of Premiums for the present season, and,

On motion of C. M. Hovey, it was recommitted, in order to make some alterations in the rules and regulations.

The following gentlemen were elected a Committee of Arrangements for the Annual Exhibition, to be held on the 20th, 21st, and 22d of September next:

Joseph Breck, Chairman; Samuel Walker, Aaron D. Williams, jr., F. W. Macondray, Otis Johnson, Joseph S. Cabot, Josiah Lovett, John Fisk Allen, David Haggerston, P. B. Hovey, jr., Ebenezer Wight, William Quant, Parker Barnes.

Abel Moore, Concord, Wm. Bogle, Melrose, were elected members of the Society.

An adjourned meeting of the Society was held Jan. 8th, 1848.

President Wilder in the chair.

The Finance Committee submitted the following report:

The Committee of Finance, having examined the accounts of the Treasurer, respectfully submit the enclosed statements of Receipts, Expenditures and Investments of the Society; from which, it appears that the Receipts have been seven thousand six hundred and thirty-three dollars and sixty-seven cents, including the balance of fifty-nine dollars and fifty-eight cens, in the Treasurer's hands at the commencement of the year, as per statement marked A. That the expenditures and investments during the year have been seven thousand five hundred and eighty-six dollars and thirty-five cents, as per statement B.

That the real estate and personal property of the Society, as valued in the schedule annexed, marked C. amounts to forty-five thousand and ninety-three dollars and fifty cents.

JOSIAH STICKNEY,
JOSEPH BALCH,
Committee.

Statement A.—Receipts from Jan. 1st to Dec. 31st, 1847.

Balance in the Treasury Jan. 1,		$59 58
Cash of Geo. Bond, Esq., Treasurer of Mount Auburn,		3,233 41
Rent and taxes of store,		1,090
" of hall,		350
Donation by Josiah Bradlee, Esq.,		500
Admission fee and assessments,		1,356
Exhibition—weekly,	$188 83	
" annual,	560 86	
		749 69
Dividends,		294 99
		$7,633 67

Statement B.—Expenditures.

Paid—Investment of Bradlee fund,		$500
" Insurance for 1847 and 1848,		115
" Premiums,		1,241
" Railroad stock,		2,458 50
" Taxes,		180
" Library,		141
" Interest,		750
" Door-keeper and care of hall,		444 72
" On acct. of Transactions,		450
" J. B. Hancock,		160 75
" Repairs,		238 13
" Printing and advertising,		409 73
" Diplomas,		43 50
" Gas,		54
" Miscellaneous expenses,		399 99
" Balance in the hands of the Treasurer Dec. 31st, 1847,		47 35
		$7,633 67

Schedule C.—Schedule of the property of the Massachusetts Horticultural Society.

Horticultural Hall, School-st, valued at,	$36,000
Three chandeliers in said hall,	390
Two marble vases,	95
Two Bradlee vases,	150
Glass and other ware,	900
Library,	1,300
Furniture and safe,	300
Appleton fund,	1,000
Lyman "	1,000
Bradlee "	500
22 shares Boston and Worcester Railroad stock—at cost,	2,458 50
	$45,093 50

The only debt of the Society known to the Committee is a note, secured by mortgage on the real estate, for fifteen thousand dollars, dated 18th May, 1844, payable in five years, with interest at the rate of five per cent. per annum—half yearly; but it is understood that there are claims against the Society for unliquidated accounts, for premiums awarded but not paid, printing, dies for medals, alterations of the Hall, painting, &c. &c., amounting to about $2000.

They also reported that a certificate of the Bradlee fund, invested in the Massachusetts Hospital Life Insurance Company, had been passed to the Treasurer.

The President, in behalf of the committee appointed to reckon with the treasurer of Mt. Auburn Cemetery, reported, that the committee had received thirty-five hundred dollars of Geo. W. Bond, Esq., treasurer of said association; and that a further sum might be expected at the final auditing of the accounts on the third Monday of this month—a day agreed upon for that purpose.

Voted, That the Committee of Finance be requested to invest, in such manner as they may deem best, *two thousand dollars*, to be added to the appropriation for paying off the mortgage on the Society's Hall.

The Executive Committee reported the list of Prizes to be awarded the present year, with a revised code of regulations, which was accepted.

The Chairman of the Library Committee, C. M. Hovey, submitted the annual report, which was accepted and placed in the hands of the Executive Committee to fill up the appropriation with such an amount as the funds of the Society will warrant.

Voted, That the Committee of Publication be requested to have the reports of the several committees, awarding premiums for 1847, printed for the use of the members, and laid upon the table at the next meeting.

Adjourned to first Saturday in February.

Premium List for 1848.

PROSPECTIVE PREMIUMS.

For objects to be originated subsequent to A. D. 1846, and which, after a trial of five years, shall be deemed equal, or superior, in quality, and other characteristics, to any now extant.

For the best Seedling Pear, the Society's large Gold Medal, valued at	$60 00
For the best Seedling Apple, the Society's large Gold Medal, valued at	60 00
For the best Seedling Hardy Grape, the Society's large Gold Medal, valued at	60 00
For the best Seedling Plum, the Appleton Gold Medal,	40 00
" " Cherry, the Lowell Gold Medal,	40 00
" " Strawberry, the Lyman Plate,	50 00
" " Raspberry, the Bradlee Plate,	40 00
" " Hardy Rose, the Society's large Gold Medal,	60 00
For the best Seedling Camellia Japonica, the Society's large Gold Medal,	60 00
For the best Seedling Azalea Indica, the Lowell Gold Medal,	40 00
For the best Seedling Tree Pæonia, the Appleton Gold Medal,	40 00
For the best Seedling Herbaceous Pæonia, the Lowell Gold Medal,	40 00
For the best Seedling Potato, the Society's large Gold Medal,	60 00

SPECIAL PRIZE LIST OF FRUITS.

To be awarded in the year 1848, *viz: Twenty Prizes of Five Dollars Each.*

2 prizes two best varieties and specimens of				Summer Apples.
2	"	"	"	Autumn Apples.
2	"	"	"	Winter Apples.
2	"	"	"	Summer Pears.
2	"	"	"	Autumn Pears.
2	"	"	"	Winter Pears.
3 prizes best varieties of Cherries.				
2	"	"	Plums.	
3	"	"	Peaches.	

The specimens presented for the above prizes, shall consist of not less than three specimens of each variety of Apples, Pears and Peaches; not less than one dozen Plums, and two dozen Cherries; all of which shall be at the disposal of the Committee on Fruits.

PREMIUMS FOR FRUITS.

For the best and most interesting exhibition of Fruits, during the season, the Lowell Medal or Plate, valued at	$25 00
For the next best, the Bradlee Plate, valued at	15 00

To be awarded at the Annual Exhibition in September.

APPLES.—For the best twelve varieties, of twelve specimens each, the Society's Plate, valued at	25 00
For the 2d best do. the Appleton Silver Gilt Medal,	10 00
For the 3d best do.	5 00
PEARS.—For the best twelve varieties, of twelve specimens each, the Lyman Plate, valued at	25 00
For the 2d best do. the Lowell Silver Gilt Medal,	10 00
For the 3d best do.	5 00
GRAPES.—For the best five varieties, two bunches each, the Lyman Plate, valued at	15 00
For the best three varieties, two bunches each, the Bradlee Plate, valued at	10 00
For the best two varieties, two bunches each,	7 00
For the best one variety, two bunches,	5 00
ASSORTED FRUIT.—For the best basket of Fruit, of various kinds,	10 00
For the next best do.,	7 00
For the next best do.,	5 00
For the best dish of Apples, not less than twelve specimens of one variety,	6 00
For the 2d best do.,	4 00
For the best dish of Pears, not less than twelve specimens of one variety,	6 00
For the next best do.,	4 00

Assorted fruits in baskets shall not be entitled to any other than the premium for such.

☞ The above premiums to be awarded on the first day of the Exhibition.

PREMIUMS DURING THE SEASON.

APPLES.—For the best Summer Apples, on or before the 1st September,	6 00
For the next best do.,	4 00
For the best Fall Apples, on or before the 1st Dec.,	6 00
For the next best do.,	4 00
For the best Winter Apples, on or before the 3d Saturday in December,	6 00
For the next best do,	4 00
PEARS.—For the best collection of new Pears, not exhibited before this year, the Society's Silver Gilt Medal,	15 00
For the next best,	10 00
For the best Summer Pears, on or before the 1st September,	6 00
For the next best do,	4 00
For the best Fall Pears, on or before the 1st Dec.,	6 00
For the next best do.,	4 00
For the best Winter Pears, on or before the 3d Saturday in December,	10 00
For the next best do,	6 00
CHERRIES.—For the best specimen, not less than two quarts,	6 00
For the 2d best do.	4 00
PEACHES.—For the best specimens grown under glass, previous to July 15,	6 00
For the 2d best do.	4 00
For the best specimen grown in open culture,	6 00
For the 2d best do.,	4 00
NECTARINES.—For the best specimen of Nectarines,	6 00
For the 2d best do.,	4 00
QUINCES.—For the best specimens of the best kind of Quinces,	5 00
For the 2d best do.,	3 00
PLUMS.—For the best Plums, of the best flavor, not less than two quarts,	6 00
For the next best do.,	3 00
GOOSEBERRIES.—For the best flavored and finest specimens, two boxes,	5 00
For the 2d best do.,	3 00
CURRANTS.—For the best flavored and finest specimens, two boxes,	5 00
For the 2d best do.,	3 00
RASPBERRIES.—For the best specimens of Raspberries, not less than two boxes,	5 00
For the 2d best do.,	3 00
BLACKBERRIES.—For the best specimens of Blackberries, not less than two boxes,	5 00
For the 2d best do.,	3 00

STRAWBERRIES.—For the best specimens of Strawberries, not less than two boxes, ... $6 00
For the 2d best do., ... 4 00
For the 3d best do., ... 3 00
MUSKMELON.—For the best Muskmelon, ... 5 00
For the 2d best do., ... 3 00
FIGS.—For the best specimen of Figs, ... 5 00
For the 2d best do., ... 3 00
GRAPES.—For the best specimens and the best varieties of Grapes, grown under glass previous to July 1st, ... 10 00
For the 2d best do., ... 7 00
For the best specimens and varieties of Grapes, grown under glass subsequently to July 1st, ... 10 00
For the 2d best do., ... 7 00
GRAPES, (*Native.*)—For the best specimen and variety of Native Grapes, ... 5 00
For the 2d best do, ... 3 00

☞ The Committee on Fruit will hold a session to award the premiums on Summer Apples and Pears, on the first Saturday in September.

On Autumn and Winter Apples and Pears, on the third Saturday in December.

All gratuities for Seedlings, will be equal to the highest prize awarded to that variety of fruit.

PREMIUMS FOR PLANTS, FLOWERS, AND DESIGNS.

Display of Green-house Plants, in pots, Through the Season.

For the best display of Green house Plants, in pots, through the season, the Appleton Gold Medal, valued at 40 00
For the 2d best display of do., the Society's Silver Gilt Medal, valued at 15 00

Provided, however, that whatever amount may be awarded during the season, for the exhibition of Pot Plants, to the person who shall be entitled to said medals, shall be deemed as constituting a part of their value.

Display of Green-house Plants in Pots.

To be exhibited at the opening of the Hall, on the first Saturday in May:

PELARGONIUMS.—*Class I*—For the best six new and rare varieties, grown in eight inch pots, ... 6 00
For the 2d best do, ... 4 00
Class II.—For the best six varieties of any sort, grown in large pots, ... 6 00
For the 2d best do., ... 4 00
ROSES.—For the best six varieties of Tea, Bourbon, Noisette, or Bengal, ... 6 00
For the 2d best do., ... 4 00
CUT FLOWERS—For the best display, ... 3 00
For the 2d best do., ... 2 00
FUCHSIAS.—For the best six varieties, ... 6 00
For the 2d best do., ... 4 00
CACTUS.—For the best six varieties, ... 3 00
For the 2d best do., ... 2 00
CALCEOLARIAS—For the best six varieties, ... 3 00
For the 2d best do., ... 2 00
CINERARIAS.—For the best six varieties, ... 3 00
For the 2d best do., ... 2 00
HEATHS—For the best varieties, ... 3 00
For the 2d best do., ... 2 00
VARIOUS SORTS.—For the best display of various sorts of Green-house Plants, not less than twelve pots, 8 00
For the 2d best display, ... 5 00
HYACINTHS—To be awarded 2d Saturday in May.
For the best display, not less than twenty varieties, $5 00
For the 2d best do. 3 00
TULIPS.—To be awarded the 3d Saturday in May.
For the best thirty distinct varieties, ... 8 00
For the 2d best do., ... 6 00
For the 3d best do., ... 3 00
PANSIES.—To be awarded the 4th Sattirday in May.
For the best twelve distinct varieties, ... 4 00
For the 2d best do, ... 3 00
For the 3d best do., ... 2 00
HAWTHORNS.—To be awarded 4th Saturday in May.
For the best display, ... 3 00
For the 2d best do. 2 00
HARDY AZALEAS.—To be awarded 4th Sat. in May.
For the best display, ... 3 00
For the 2d best do. 2 00
SHRUBBY PÆONIES.—To be awarded 4th Sat. in May.
For the best six varieties, ... 5 00
For the 2d best do., ... $4 00
For the best display, ... 3 00
HERBACEOUS PÆONIES.—To be awarded 2d Sat. June,
For the best twelve flowers, having regard to the number of varieties, ... 5 00
For the 2d best do., ... 4 00
For the best display, ... 3 00
PINKS.—To be awarded 3d Saturday in June
For the best six distinct varieties, ... 4 00
For the 2d best do, ... 3 00
For the best display, ... 2 00
HARDY ROSES—To be awarded 3d Saturday in June,
CLASS I.—For the best thirty distinct varieties, ... 8 00
For the 2d best do., ... 6 00
For the 3d best do., ... 4 00
For the best display, ... 3 00
CLASS II.—For the best twelve distinct varieties, . 5 00
For the 2d best do., ... 3 00
For the 3d best do., ... 2 00
CLASS III.—HARDY PERPETUAL ROSES.—For the best ten varieties, ... 5 00
For the 2d best do., ... 3 00
For the best display, ... 3 00
PRAIRIE ROSES.—For the best display, not less than four varieties 4 00
For the 2d best do., ... 3 00
CARNATION AND PICOTEE PINKS.—To be awarded 3d Saturday in July.
For the best ten varieties, ... 5 00
For the 2d best do., ... 4 00
For the best display, ... 3 00
MAGNOLIAS.—For the best display through the season, 3 00
For the 2d best do., ... 2 00
HARDY RHODODENDRONS—For the best display of the season, ... 3 00
For the 2d best do. 2 00
DOUBLE HOLLYHOCKS.—To be awarded 3d Sat. in July
For the best display, ... 3 00
For the 2d best do., ... 2 00
For the 3d best do 1 00
DOUBLE BALSAMS.—To be awarded 3d Sat in Aug.
For the best display, ... 3 00
For the 2d best do., ... 2 00
For the 3d best do., ... 1 00
PHLOXES.—To be awarded 3d Saturday in August.
For the best ten distinct varieties, ... 6 00
For the 2d best do., ... 4 00
For the 3d best do., ... 3 00
GERMAN ASTERS—To be awarded 2d Sat in Sept.
For the best display, ... 4 00
For the 2d best do., ... 3 00
For the 3d best do., ... 2 00

BOUQUETS, WREATHS, DESIGNS, &c.

Premiums to be awarded at the Annual Exhibition.

VASE BOUQUETS.—For the best pair suitable for the Bradlee Vases, the Bradlee Plate, valued at..... $10 00
For the 2d best do., ... 6 00
For the best pair for the Society's marble Vases,.. 10 00
For the 2d best do., ... 6 00
PARLOR BOUQUETS.—For the best pair suitable for the parlor, ... 8 00
For the 2d best do., ... 6 00
For the 3d best do, ... 5 00
For the 4th best do., ... 3 00
POT PLANTS.—For the best display of not less than twenty Pot Plants, ... 12 00
For the 2d best do., ... 10 00
For the 3d best do., ... 8 00
For the 4th best do., ... 5 00
COXCOMB—For the best six pots, ... 3 00
For the 2d best do, ... 2 00
DALSAMS.—For the best six pots, ... 3 00
For the 2d best do. 2 00
DAHLIAS.—To be awarded 4th Saturday in Sept.
DIVISION A.—*Primier Prize.*—For the best 12 dissimilar blooms, the Society's Silver Medal, ... 5 00
Specimen Bloom.—For the best flower, ... 3 00
Various Colors.—For the best yellow, buff, or orange; purple or maroon; crimson or claret; very dark; white; edged or tipped; scarlet; pink or rose, a premium of $1.00 each, ... 8 00
DIVISION B.—CLASS I.—For the best twenty-four dissimilar blooms, ... 8 00

For the 2d best do. do.,	$5 00
Class II.—For the best eighteen dissimilar blooms,	6 00
For the 2d best do. do.,	4 00
Cass III.—For the best twelve dissimilar blooms,	5 00
For the 2d best do. do	3 00
Herbaceous-Perennials. For the best display through the season, the Society's Silver Medal,	5 00
For the 2d best do.,	4 00
For the 3d best do.,	3 00
Annuals.—For the best display through the season, the Society's Silver Medal,	5 00
For the 2d best display,	4 00
For the 3d best do.,	3 00
Camellias.—To be awarded 2d Saturday in Feb. For the best twelve varieties of cut flowers, with foliage,	8 00
For the 2d best do,	5 00
Chinese Primrose.—To be awarded 2d Sat. in Feb. For the best six varieties in pots,	3 00
For the 2d best do. do,	2 00
Green-house Azaleas.—To be awarded 2d Saturday in March For the best six varieties in pots,	6 00
For the 2d best do. do.,	4 00
Shrubby Plants.—For the best display, during the season,	5 00
For the 2d best do. do.,	4 00
For the 3d best do. do.,	3 00

PREMIUMS TO BE AWARDED AT WEEKLY EXHIBITIONS.

For the best six Pot Plants, of different varieties,	2 00
For the 2d best do.,	1 00
For the best large Bouquet for vases or parlor, composed of flowers gracefully arranged,	2 00
For the 2d best do	1 00
For the best pair of Bouquets, of any description,	2 00
For the 2d best do.,	1 00

PREMIUMS FOR VEGETABLES.

Asparagus.—For the earliest and best, not less than three bunches,	5 00
For the 2d best do.,	3 00
Beets.—For the best (pure blood beet,) during the season, not less than twelve roots,	3 00
Brococli.—For the best three heads,	5 00
Beans.—For the best and earliest peck of string Beans,	3 00
For the best and earliest Lima Beans, not less than two quarts,	3 00
For the best and earliest variety of shell Beans,	3 00
Cucumbers.—For the best pair under glass, previous to the first Saturday of June,	5 00
For the 2d best do,	3 00
For the best and earliest, of open culture,	3 00
Cauliflowers.—For the best and largest, during the season, not less than three heads,	5 00
For the 2d best do.,	3 00
Corn.—For the best and earliest sweet Corn, not less than twelve ears,	3 00
For the 2d best do.,	2 00
Cabbage.—For the best drumhead Cabbage, during the season, not less than three heads,	5 00
For the 2d best do.,	3 00
For the best Savoy Cabbage, during the season, not less than three heads,	3 00
For the 2d best do.,	2 00
Egg Plants.—The best display, during the season,	3 00
For the 2d best do.,	2 00
Lettuce.—For the best six heads, before the first Saturday in July,	3 00
For the 2d best do,	2 00
Potatoes.—For the best new seedling, of superior quality, for the table,	10 00
For the best and earliest peck, previous to Aug 1,	3 00
For the 2d best do.,	2 00
Peas.—For the best and earliest peck in June,	3 00
Rhubarb.—For the largest and best, previous to the first Saturday in July, not less than twelve stalks,	5 00
For the 2d best do.,	3 00
Squashes.—For the best pure Canada Squashes, not less than six in number,	3 00
For the greatest variety exhibited, during the season,	5 00
Tomatoes.—For the best and earliest, not less than one dozen,	5 00
Vegetables.—For the best display and greatest variety at the weekly exhibitions, during the season,	$5 00
For the 2d best do.,	3 00
For the best display and greatest variety at the annual exhibition,	10 00
For the 2d best do.,	6 00
For any new variety of Vegetables suitable for the table, and worthy of cultivation, other than seedling potatoes,	5 00
Celery.—For the best and largest blanched, not less than six roots,	5 00
For the 2d best do.,	3 00
Carrots.—For the best exhibited,	2 00

RULES AND REGULATIONS.

1. All Fruits, Flowers and Vegetables, offered for Prizes, are to be the growth of the competitors.

2. Articles exhibited for Prizes must be placed in the Stands by 11 o'clock, A. M

3. Contributors of Fruits for exhibition, or premium, are requested to present the same in dishes or baskets of the Society, or in suitable baskets or boxes of their own.

4. After the articles are arranged, they will be under the exclusive charge of the Committees, and *not even the owners*, will have liberty to *remove*, or *touch* them until the exhibition is closed, when they will be delivered as the contributors may direct.

5. No Flower, Fruit or Vegetable, will be entitled to a prize unless it possesses points of superiority; and the Committees have the discretionary power of withholding Prizes if in their opinion the articles exhibited do not merit them.

6 Plants in Pots to be entitled to Prizes must give evidence of skilful culture, in the profusion of bloom, and the beauty, symmetry, and vigor of the specimens.

7 Successful competitors will be expected to furnish remarks on their mode of cultivation, *if peculiar;* and candidates for the Fruit Prizes will be required to present specimens for trial.

8. Premiums can only be awarded to exhibitors who have complied with the published Rules and Regulations.

9. No article for which a premium has been once awarded, can receive another during the season, with exception of such Fruits as are included in the "Special Prize List."

10 The Committees are authorized to award Extra Prizes for any new or rare Fruits, Flowers, Vegetables, Plants, or Designs of merit, and for which no Premium has been offered.

11. The Fruit Committees in making their awards, will consider the flavor, beauty, and size of the specimens; and each of these properties as compared with a fair standard of the variety.

12 In deciding on the merits of a Fruit or Vegetable, its value for general cultivation will be taken into account; but *superior* specimens of any good variety will not be excluded from Prizes, even though they may not flourish in all situations.

13. When specimens are presented for a *name*, the exhibitor is requested to communicate all the information he possesses, as to the *origin*, and the *local* appellation.

14. It will be the duty of the Committees to *exclude from Exhibition all inferior specimens* Also, all such *Designs* as in their opinion evince an incorrect taste.

15. The Committees have power to change the time of exhibition, for any article, if an early or a late season renders such change necessary, giving seasonable notice thereof to the Society.

16. Any person to whom a Prize has been awarded, whether in money, medals or plate, may receive *either of like valuation*, at his option; all premium, not applied for within one year from the time of award, shall revert to the Society for its own use and benefit.

17. In order to afford the Committees an opportunity to examine and report on the articles exhibited, no other person can be admitted to, or remain in, the Hall, between the hours of eleven and a half and twelve, on the days of exhibition.

18. The Society earnestly invites the co-operation and competition of cultivators. The Prizes are *open to all*, and the Society is instituted for the *benefit of all*.

☞ The foregoing Schedule of Prizes, having received the approval of the Executive Committee, and the Regulations confirmed by a vote of the Society, is now published as the List of Premiums for the current year.

MARSHALL P. WILDER,
President.

E. C. R. Walker,
Recording Secretary.

DESIGN FOR A RURAL CHURCH.